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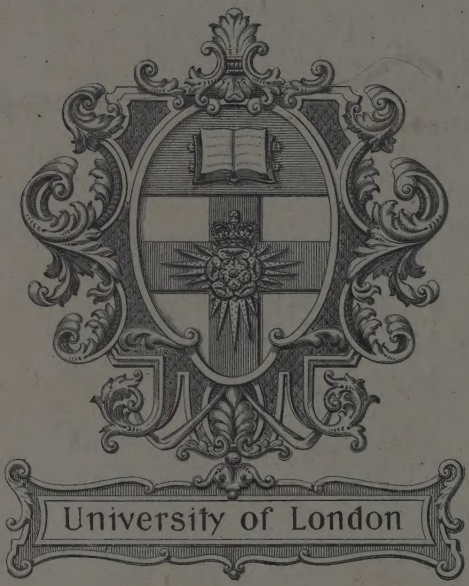
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ALKALI ACTS, 1863 and 1874.

ELEVENTH ANNUAL REPORT

BY

THE INSPECTOR

OF HIS

PROCEEDINGS DURING THE YEAR 1874.

(*Presented pursuant to Act 26 & 27 Vict. c. 124.*)

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1875.

[C.—1339.] *Price* 2*s.* 6*d.*

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Factories.
Fisheries.

Session 5 Feb. – 13 Aug. 1875.

XVI. XVII.
Octavo portions.

1875.

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ELEVENTH ANNUAL REPORT

BY

THE INSPECTOR

OF HIS

PROCEEDINGS DURING THE YEAR 1874.

TO THE LOCAL GOVERNMENT BOARD.

My Lords and Gentlemen,

The Alkali Act of 1863, after eleven years of solitary struggle with noxious gases, receives assistance from the Act of 1874, and now begins in a small degree a more vigilant, and it is to be hoped a more useful life.

I have little to do but to sum up the work of the past, and I have already done so much towards this that the summary must be short. It is such a frequent question in my mind, what is the Act doing for the good of the public? and, I may add, what are the inspectors doing? that I ought to have the replies ready; but I doubt if it is quite possible to make them with full satisfaction to all. If it is asked whether we have done the work set us to do, then I answer by the reports that we have done so; but if it be asked whether we have caused vegetation to rise up where it was not before, if we have produced or allowed to be produced fruit where fruit would not previously grow, then I am afraid we must answer, No. If, however, we are asked whether we have prevented the destruction of vegetation where otherwise it would have been destroyed, then we may safely answer, Yes. It was not our duty to cause crops to grow, it was our duty to cause the works under our charge to send out not more than five per cent. of muriatic acid. This certainly has been accomplished in the full sense. Gas has occasionally escaped from nearly every work to too great an extent for a short time, but it has been stopped, and the consequence is that the great torrents which at one time rolled over the country are not now to be found. This sounds very well, but vegetation is destroyed without torrents. A gentle flow from a chimney or other part of a work may scarcely annoy us much, and yet in time it may cause destruction to trees and to all perennial plants; whilst a little more, causing still only occasional inconvenience, may destroy

annuals and obliterate grass. We must then, in order to obtain a flourishing vegetation, avoid even small portions of gas; and the question remains, how small is the smallest amount in the air that will do injury. It is not safe to allow even as much of sulphur gases as we have in Manchester and similar large towns if we consider vegetation alone.

If more is allowed, then trees disappear. In these small quantities the effects of sulphurous acid and sulphuric will probably be nearly the same. Different opinions are given on this subject. My opinion is that sulphuric acid does most harm at once, but it may be that in the long run there may be more harm done by sulphurous acid first by acting as a deoxidiser, and next by acting, if we may so speak, as sulphuric acid into which it is converted. Of this, however, I know no evidence; but the perception of sulphurous acid being keener and more immediate may favour the supposition, and a not uncommon belief that it does more harm may be founded on better evidence than I can find for myself.

Allowing for the time that when the quantities are small the relative activities of the gases approach each other, I am inclined to go back to a proposal made some time ago in a former report, that the condition of the air of a place ought to be estimated before allowing a chemical work to be established.

If an atmosphere is made to contain 1,000 grains of sulphuric acid per million cubic feet when there are ten works in the community, say in half a square mile or any other space, it cannot be expected to contain air of the same amount of purity when there are eleven works in the space, unless the eleventh work gives out no emanation whatever. But if this absolute purity is not found in the ten, why should it be expected in the eleventh? The expectation is simply irrational; and as places increase in manufacturing industry the air becomes less pure unless the processes are improved. If the processes do not improve the community must either prevent increase or suffer more inconvenience by increase.

This reasoning is childishly simple, but it is not the less needful to write it down, since the complaints continually increase with the increase of works, and the increase of works is not only permitted, but for national as well as private purposes desired.

We have not yet looked the matter with the greatest fullness in the face. If we are determined to keep towns to a certain standard of purity we must make the standard: if we keep only the works themselves to a standard, then the number of works must not increase, for then the relation of the air of the town to the standard would be altered. It has been shown, as I believe, in my reports, that a chemical standard may with great ease be obtained, but it is one which the community does not fully appreciate, and it is left in the hands of few; but there is one standard known to all, and that is vegetation. This is the most watchful of all inspectors, and the most accurate, and it only requires to be brought into scientific order to be made suitable for constant reference.

It may be taken for granted that where trees flourish, there also man is uninjured by acids such as are given out by chemical works. I say it may be taken for granted at present, but it is only because we know little, and it may be that the influences are hurtful to some extent to men whenever trees suffer. But this we know, that trees may die in an atmosphere tainted by the acids alluded to when men generally are not sensible of inconvenience. The effect on vegetation, therefore, is more striking than upon human beings. The number of circumstances that influence the death rate is great.

However, I wish to say that we have the matter in our hands; we can estimate the condition of an atmosphere in its relation to acids by the vegetation, but we can estimate it also by chemical methods: and if we allow it to go out of order we must not only blame the works, but ourselves who allowed the works; and if we cannot prevent them we must either submit or fix the standard for them. The standard for the works is not of so much importance as the standard for the district, so that at present our acts are in a very infantile state. It is little matter how much is given out by any work if the district is not injured, and it might happen, when the work was small, that a great proportion would be after all a trifle, but when many works exist a small proportion would of itself be a great evil. I have reasoned more or less in this way repeatedly, but I know that we are not quite ready for legislation embodying all these ideas, we shall probably be prepared before that time comes when our works decay, and the desire to keep them in order shall give way to the hope of keeping them in existence. The progress of the community and of chemical manufactures must go on together, and it may be considered certain that prosperity will endure more pressure, since prosperous men are more ready to complain and more able also to remove cause of complaint.

[See Note at end of Report.]

No. 1 District.

The results of the inspection of No. 1 District as sent by Mr. Fletcher are very satisfactory, although there have been considerable complaints. The works are in many cases unfortunately situated in relation to trees and pleasure grounds, and it is difficult to say what the result of the increased power of attention will be. However, if the manufactures increase in numbers and in magnitude as they have done, it will perhaps not be possible to do more than to keep pace with them and prevent more mischief. I hope this state will be reached. If there should be a difficulty, the great question, who gains most, the community or the individual, will to a certainty be settled by the greater power, but in doing this the rights of the smaller cannot be forgotten. I need not repeat what I have before said on damages.

ESCAPE of MURIATIC ACID in No. 1. DISTRICT.—Average Numbers for the year 1874.

Register Number.	Salt decomposed per week.	Number of close Salt cake Roasting Furnaces.	Number of open Salt cake Roasting Furnaces.	Muriatic Acid found in one cubic foot of Air in Chimney or Culvert.	Muriatic Acid escaping through the Chimney compared with that producible from the Salt decomposed.
No.	Tons.	No.	No.	Grains.	Per cent.
1	100	3	0	0·15	3·42
2	12	1	0	0·18	4·66
3	15	0	1	0·15	1·20
4	180	3	0	0·21	2·53
5	60	2	0	0·16	1·56
6	150	3	0	0·48*	2·81
7	300	5	0	0·21	3·76
8	250	4	0	0·15	4·74
9	90	3	0	0·21	2·61
10	160	4	0	0·14	2·20
11	400	7	1	0·14	1·94
12	180	4	0	0·10	2·10
13	60	2	0	0·21	2·40
14	200	0	4	0·03	1·64
15	200	1	2	0·05	1·60
16	150	2	1	0·04	1·65
17	180	3	0	0·31	3·52
18	250	5	0	0·13	2·65
19	180	3	0	0·10	1·82
20	150	0	5	0·43*	3·06
23	150	3	0	0·17	1·67
26	600	10	4	0·14	2·08
27	130	3	0	0·19	4·00
75	180	4	0	0·23	3·39
88	130	3	0	0·12*	0·48
89	420	9	0	0·27	3·36
92	160	1	3	0·17	3·26
96	160	3	0	0·09	3·49
97	150	4	0	0·44	2·71
100	100	2	0	0·36	1·71
102	80	2	0	0·33	3·71
103	45	1	0	0·12	2·54
104	20	1	0	0·16*	2·14
112	100	2	0	0·26	3·91
113	500	4	4	0·30	3·51
118	300	4	0	0·28	2·60
123	300	5	0	0·33	3·10
126	60	2	0	0·21*	2·14
131	25	–	–	0·28*	1·48
133	25	1	1	0·83*	2·33
Total -	6902	Average -		0·19	2·64

* These tests have been made in culverts, not in chimneys, where the muriatic acid is further diluted, they are therefore not included in the average at foot of column 5.

No. 2. District.—Dr. T. H. Hobson.

Chimney.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
28	0·08	22·096	4·10
,,	0·07	19·334	3·58
,,	0·07	19·334	3·58
,,	Altering the chimney.	No experiment.	
,,	—	—	4·09
,,	0·07	19·334	3·58
,,	0·04	11·048	2·04
	Average -	-	3·48

I have occasionally had to complain of leaky gas flues causing too much acid to be floating about the work.

Flue.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
30	1·50	8·655	4·12
,,	1·14	6·577	3·13
,,	1·24	7·154	3·40
,,	1·06	6·116	2·91
,,	0·86	5·019	2·39
,,	Not working.	Putting in a new pot.	
,,	—	—	2·75
,,	1·46	8·424	4·01
,,	The tower better.	Testing apparatus was broken.	
,,	2·00	11·540	5·50*
,,	1·08	6·231	2·96
,,	1·20	6·924	3·29
,,	0·64	3·692	1·75
,,	1·14	6·577	3·13
,,	0·97	5·596	2·66
,,	1·10	6·347	3·01
,,	1·00	5·770	2·74
	Average -	-	3·00

* No cause could be discovered to account for this large escape on July 25th. That it was merely accidental was clearly shown by the decreased amount on July 27th.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
31	Flue - - 0·20	2·422	1·35
„	Exit - - 0·34	1·540	
„	Top flue - 0·14	4·922	2·91
„	„ exit - 0·26	5·811	
„	Bottom flue - 0·40	4·884	
„	„ exit - 0·42	1·902	
„	All seemed as usual. Measured draught of a new flue.		
„	All seemed as usual.		
„	Not working.		
„	Flue - - 0·11	3·867	3·56
„	Exit - - 0·31	6·928	
„	Flue - - 0·42	5·128	3·73
„	Exit - - 1·34	6·070	
„	Not working.		
„	Flue - - 0·12	1·465	0·63
„	Exit - - 0·10	0·452	
„	Flue - - 0·17	2·075	0·81
„	Exit - - 0·08	0·362	
„	Flue - - 0·17	2·075	0·96
„	Exit - - 0·18	0·815	
„	Flue - - 0·14	1·709	1·93
„	Exit - - 0·24	1·087	
„	Apparatus not complete.		
„	—	—	1·33
„	Flue - - 0·17	2·075	1·08
„	Exit - - 0·26	1·177	
„	Top flue - 0·30	10·548	3·27
„	„ exit - 0·30	6·705	
„	Bottom flue - 0·16	1·953	
„	„ exit - 0·10	0·453	
	Average - -		1·96

CHIMNEY.

32	0·10	25·500	2·68
„	0·09	22·950	2·41
„	0·11	28·050	2·95
„	0·12	30·600	3·22
„	0·06	15·300	2·42
„	0·06	15·300	2·42
„	0·11	28·056	2·95
„	0·09	22·950	3·64
„	Not working.		
„	0·09	22·500	2·40
„	0·08	20·400	2·15
„	0·07	17·850	1·87
„	0·14	35·700	3·75
„	0·08	20·400	2·15
„	All as usual. No experiment.		
„	0·08	20·400	2·15
„	0·12	30·600	3·22
„	All as usual. No experiment.		
„	—	—	3·48
	Average - -		2·74

Register Number.	Escape of HCl.		
	Grains per Cubic foot.	Lbs. per Hour.	Per Cent.
33	Flue 2·81	41·194	6·93*
,,	Exit 0·20	0·416	
,,	Flue 1·16	17·005	2·83*
,,	,, 1·24	18·178	3·03
,,	Flue 0·91	13·340	2·29
,,	Exit 0·20	0·416	
,,	Flue 1·04	15·246	2·54
,,	,, 0·55	8·033	1·33
,,	,, 0·58	8·508	1·41
,,	,, 1·76	24·801	4·13
	Charge not ready.		
,,	Flue 0·80	11·722	1·95
,,	,, 0·83	12·167	4·05
	All appeared as usual.		
,,	Flue 3·21	47·058	7·84†
,,	,, 1·00	14·660	2·09
,,	,, 0·56	8·209	1·25
,,	Exit 0·25	0·520	
,,	Flue 1·10	16·126	2·30
,,	,, 1·40	20·520	2·93
	Average - - -		3·127

FLUE.

34	0·53	9·868	3·52
,,	0·38	7·075	2·52
,,	0·76	14·150	5·04‡
,,	0·54	10·054	3·59
,,	0·73	13·592	4·85
	Not working.		
,,	0·30	5·586	1·99
,,	0·45	6·625	2·37
,,	0·50	9·310	3·32
	All as usual. No experiment.		
,,	1·06	17·28	6·17
	Not working.		
,,	0·45	8·379	2·99
,,	0·12	2·234	0·79
	Average - -		3·37

* No alteration whatever was made between the experiments on January 23rd and 30th, it seems curious therefore that the escape should have been so much smaller on the latter day.

† After finding the escape so large on October 16th I wrote to the owner of the work, he immediately had both the furnaces repaired.

‡ No cause could be discovered to account for the large escape on February 20th. The furnace was stopped on October 18th, and a new one built.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
35	1 and 2 — 0·55	10·158	
,,	4 — 0·46	12·990	6·70*
,,	7 and 8 — 1·83	50·398	
,,	9 — 1·00	80·000	
,,	1 — 0·84	15·514	
,,	4 — 0·36	10·166	4·56
,,	7 and 8 — 1·38	38·005	
,,	9 — 0·30	24·000	
,,	1 and 2 — 0·32	5·910	
,,	7 — 0·34	9·363	8·96*
,,	9 and 10 — 2·16	171·200	
,,	1 and 2 — 0·41	7·472	
,,	4 and 5 — 0·33	9·319	2·62
,,	9 and 10 — 0·44	35·200	
,,	1 and 2 — 0·64	11·820	
,,	4 — 0·10	2·824	2·83
,,	7 and 8 — 0·48	13·219	
,,	9 and 10 — 0·50	40·000	
,,	1 and 2 — 0·41	7·572	
,,	4 — 0·23	6·495	2·00
,,	7 and 8 — 0·55	15·147	
,,	9 — 0·21	16·800	
,,	1 and 2 — 0·12	2·216	
,,	4 — 0·13	3·671	0·91
,,	7 and 8 — 0·32	8·812	
,,	9 and 10 — 0·13	10·400	
,,	1 and 2 — 0.27	4·986	
,,	4 — 0·14	3·953	1·23
,,	7 and 8 — 0·27	7·435	
,,	9 and 11 — 0·16	12·800	
	Average - -		3·726
40	Chimney 0·09	1·098	0·70
,,	Exit 0·34	4·539	
	About a complaint.		
,,	Chimney 1·24	13·370	3·30
,,	Exit 0·26	3·471	
,,	Chimney 0·80	9·760	1·75
,,	Exit 0·34	4·539	
,,	Chimney 0·07	0·854	0·40
,,	Exit 0·11	1·468	
,,	Chimney 0·10	1·220	0·58
,,	Exit 0·16	2·136	
,,	Chimney 0·18	2·196	0·90
,,	Exit 0·22	2·937	
,,	Chimney 0·10	1·220	0·91
,,	Exit 0·30	4·005	
,,	Chimney 0·38	4·636	1·51
,,	Exit 0·30	4·005	
,,	Chimney 0·14	1·708	0·81
,,	Exit 0·22	2·937	
	Apparatus out of order. Experiment lost.		
	Average - -		1·207

* As soon as the great escapes on February 6th and May 6th were found out, immediate steps were taken to reduce it. The escape in both cases was from the same furnaces.

FLUE.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
*41	No experiment.		
,,	0·24	4·446	1·77
,,	0·37	6·856	2·74
,,	0·48	8·892	3·55
,,	0·11	2·038	0·81
†,,	0·74	13·712	5·48
,,	0·41	7·597	3·03
,,	0·56	10·376	4·15
,,	0·25	4·632	1·85
,,	0·30	5·559	2·22
,,	0·80	14·824	5·92
,,	The furnace under repairs.		
,,	0·28	5·188	2·07
,,	0·72	13·341	5·33
,,	Working irregularly. No experiment.		
,,	1·20	22·236	8·89
,,	0·54	10·006	4·00
,,	1·30	24·089	9·63
,,	Furnace newly repaired, was being heated.		
,,	0·58	10·747	4·29
,,	1·15	21·309	8·51
,,	0·40	7·412	2·96
,,	Repairing.		
,,	Not properly at work.		
,,	0·60	11·118	4·44
,,	0·80	14·824	5·92
,,	0·66	12·229	4·90
,,	0·80	14·824	5·92
,,	—	—	4·74
,,	0·70	12·971	5·18
‡,,	Just commencing work. No experiment.		
,,	Roasting nitre cake.		
,,	0·10	1·853	0·74
	Average - -		4·36

It will be seen that the escape at this work has varied more than in any other, sometimes being very great indeed. The furnace was repeatedly stopped, repaired, and in some cases rebuilt, but still the escape continued, and appeared almost unaccountable. It was at length, however, found that the bottom of one of the stone cisterns, through which the gases from the pot and furnace pass before reaching the towers, was cracked, and as these cisterns had been placed over the fire flue the acid was draining into it, thus accounting for the great amount present in the flue. As soon as this was found out a new fire flue was made, and the escape became more regular and very much smaller.

* A hole had been found in the bridge, and the furnace stopped for repairs. Only just at work again.

† This escape may be accounted for by the fact that the furnace was put out on the 2nd inst. and only relighted on the 6th.

‡ A leakage from a cracked stone cistern into the fire flue had been discovered. This will account for the recent large amounts of acid in the flue.

CHIMNEY.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
42	Not working.		
"	0·13	10·182	2·79
"	0·16	12·532	3·05
"	0·12	9·419	2·49
"	Working irregularly. No experiment.*		
"	0·13	10·182	2·67
"	0·05	3·916	1·03
"	Experiment lost.		
"	0·15	11·748	3·09
"	Working irregularly. No experiment.*		
"	0·14	10·966	2·88
"	No experiment. All appeared as usual.		
"	0·08	6·266	1·64
"	0·16	12·532	3·28
"	Working irregularly. No experiment.*		
"	0·10	7·833	2·06
"	Working irregularly.		
"	0·08	6·266	1·64
"	Not working.		
"	Roasting nitre cake.		
"	Ditto.		
"	Ditto.		
"	0·10	7·833	2·06
"	0·35	27·415	3·60
"	Roasting nitre cake.		
"	Working irregularly.		
"	Not working.		
"	Working irregularly for want of coal.		
"	Roasting nitre cake.		
"	The pot not yet put in.		
"	0·10	7·833	2·07
"	Not working.		
	Average - - -		2·453
43	0·46	13·800	2·42
"	0·24	7·200	1·26
"	0·40	12·000	2·14
"	0·41	12·300	2·15
"	0·40	12·000	2·14
"	0·27	8·100	1·42
"	0·20	6·000	1·05
"	0·24	7·200	1·26
	Average - - -		1·730

* In consequence of very weak vitriol.

I have occasionally had to complain of too much acid gas floating about in the yard at this work.

CHIMNEY.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
45	Not properly at work.		
,,	0·05	4·567	0·97
,,	0·13	11·874	2·52
,,	0·06	5·480	1·16
,,	0·11	10·047	2·13
,,	0·11	10·047	2·13
,,	Not working.		
,,	0·13	11·876	2·52
,,	0·10	9·134	1·94
,,	0·10	9·134	1·94
,,	0·12	10·960	2·33
,,	Apparatus out of repair.		
,,	0·13	11·874	2·52
,,	All as usual.	No experiment.	
,,	0·16	14·164	3·10
,,	0·17	15·527	4·92
,,	0·08	7·307	2·31
,,	0·23	21·008	4·46
		Average - -	2·49

I have almost on every visit that I have made to this work had to complain of the great leakage of gas from the pipes, cisterns, &c., which has in every case been so great that I have hesitated whether the work should not be stopped until it was altered.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
46	Not working.		
,,	Ditto.		
,,	Exit 0·02	0·72	0·22
,,	,, 0·14	0·404	0·12
,,	,, 0·14	0·404	0·12
,,	,, 0·10	0·360	0·11
,,	,, 0·17	0·464	0·13
,,	Chimney 0·05	7·463	2·05
,,	Apparatus out of order.		
,,	Chimney 0·05	7·463	2·05
,,	Not working.		
		Average - -	0·686

FLUE.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
47	0·44	9·900	3·80
"	0·55	12·375	2·81
"	0·53	11·925	4·58
"	1·11	24·975	5·67
"	0·46	10·350	2·35
"	0·28	7·300	0·98
"	0·10	2·250	0·30
"	1·32	29·700	4·01
"	0·68	15·300	3·53
"	All as usual.	No experiment.	
"	0·10	2·250	0·30
"	All as usual.	No experiment.	
"	0·61	13·725	1·85
"	0·28	6·300	0·85
"	0·30	6·750	0·91
"	0·44	9·900	1·33
"	0·61	13·725	1·85
		Average - -	2·34

The escape at this work has varied very much. In all cases when it has been great immediate steps have been taken to reduce it.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
48	Roasting nitre cake.		
"	0·12	3·408	1·31
"	0·12	3·408	1·31
"	Roasting nitre cake.		
"	0·09	2·536	0·98
"	0·04	1·136	0·43
"	No experiment.		
"	0·08	2·272	0·87
"	Roasting nitre cake.		
"	No charge in furnace.		
"	Ditto.		
"	0·08	2·272	0·87
"	Furnace finished working.		
"	0·08	2·272	0·87
"	Roasting nitre cake.		
"	Charge in furnace too nearly finished.		
"	Furnace finished working.		
"	Roasting nitre cake.		
"	0·06	1·704	0·65
"	The charge not ready.		
"	Drawing the charge.		
"	0·10	2·840	2·84
"	0·07	1·988	1·98
"	Not working.		
		Average - -	1·211

Chimney.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
49	Commencing work.		
„	Large chimney - 0·08	10·688	0·57
„	Small „ - 0·03	1·392	
„	Experiment lost.		
„	Large „ - 0·13	17·368	0·82
„	Not working.		
„	All appeared as usual.		
„	Large „ - 0·39	52·004	2·58
„	Small „ - 0·05	2·320	
„	Large „ - 0·38	50·768	2·79
„	Small „ - 0·34	17·632	
„	Large „ - 0·51	68·136	2·98
„	Small „ - 0·11	5·104	
„	Large „ - 0·10	13·360	1·02
„	Small „ - 0·10	4·640	
„	Large „ - 0·33	44·088	1·91
„	Small „ - 0·06	2·784	
„	Large „ - 0·56	74·816	3·24
„	Small „ - 0·10	4·640	
„	Large „ - 0·23	30·728	1·63
„	Small „ - 0·22	10·208	
	Average - -		1·949

Chimney.

90	0·20	19·980	3·17
„	0·14	13·286	4·11
„	0·24	22·776	3·61
„	0·15	14·255	4·55
„	0·16	15·184	2·41
„	0·30	28·470	4·52
„	0·27	25·620	8·10*
„	0·14	13·286	1·82
„	0·16	15·184	2·07
„	0·28	27·572	4·37
„	Experiment spoiled.		
	Average - -		3·873

* As soon as it was known that the escape on August 26th was so great, the furnaces were repaired. It will be seen that on my next visit the escape was very considerably diminished.

FLUE.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
111	0·15	3·885	1·17
,,	0·32	8·288	1·33
,,	0·20	5·180	0·83
,,	0·12	3·880	0·50
,,	0·15	3·885	1·17
,,	0·30	7·790	2·68
,,	0·20	5·180	1·56
,,	0·67	17·350	5·25*
,,	1·06	27·454	4·42
,,	0·32	8·288	2·85
,,	0·42	10·878	1·75
,,	0·88	22·792	3·67
,,	0·64	16·576	2·67
,,	0·13	3·367	1·02
,,	0·30	7·790	2·68
,,	1·04	26·936	4·32
,,	0·40	10·360	1·67
,,	0·17	4·403	1·33
,,	0·57	14·763	4·47
,,	0·37	9·583	1·54
,,	Finished working.		
,,	0·42	10·878	3·29
,,	Stopped.		
,,	0·10	2·590	0·89
,,	0·66	17·094	2·75
,,	0·48	12·432	3·76
,,	Just commenced working.		
,,	Ditto.		
,,	0·10	2·590	0·78
	Average - -		2·334

† No cause could be discovered to account for the great escape on April 17th. I have repeatedly had to complain of the amount of acid gas in the yard of this work.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
112	0·30	4·236	3·36
,,	Not working.		
,,	Ditto.		
,,	0·51	7·201	5·71
,,	0·69	9·742	7·72
,,	Not working.		
,,	Work nearly finished. No experiment.		
,,	Working irregularly. Ditto.		
,,	Not working.		
,,	Discontinued to make salt cake.		
	Average - -		5·597

CHIMNEY.

Register Number.	Escape of HCl.		
	Grains per Cubic Foot.	Lbs. per Hour.	Per Cent.
120	0·14	6·734	2·32
,,	0·12	5·772	1·98
,,	0·10	4·810	1·65
,,	0·15	7·215	2·48
	Average - -		2·107

FLUE.

130	Not working.		
,,	0·10	5·683	1·57
,,	0·12	6·821	1·89
,,	0·24	14·639	4·06
,,	0·06	3·409	0·94
,,	0·12	6·819	1·89
,,	0·65	36·939	10·26*
	Average - -		3·870

* As soon as I informed the proprietor of the work of the large escape on October 22nd, the furnace was stopped, and has not been worked since.

CYLINDER MAKERS.

Register Numbers.	Register Numbers.
29	44
36	110
38	121

Nothing of importance happened at these works during the year. All kept in order.

Register No. 129.

Hydrochloric acid has not been made at this work this year.

ESCAPE OF HCl. AVERAGES FOR EACH MONTH.

	Per Cent. H Cl.		Per Cent. H Cl.
January - -	2·65	July - -	2·95
February - -	2·67	August - -	3·16
March - -	2·41	September - -	2·95
April - -	3·34	October - -	2·92
May - - -	2·71	November - -	2·88
June - -	2·13	December - -	2·48
Average of the 12 months -	2·771		

During the year one new work has commenced, but only in a very small way, and up to the present time very little work has been done; two others are nearly ready to commence.

During the year I have made 470 visits to the different works in my district: on many occasions, from various reasons, I have not been able to ascertain from actual experiment the amount of acid escaping, but I have, as far as I could from observation only, assured myself that the work was satisfactorily carried on.

No. 2 District.—Brereton Todd, Esq., 1874.

Register Number.	Month.	Inlet Gas. HCl. Grains per cub. ft.	Outlet Gas. HCl. Grains per cub. ft.	Escape per Cent.
50	February -	20	0·4	2 ÷ 3 = 0·7.
„	March -	24	0·3	1·2 ..... = 0·4.
„	April -	20	1·0	5 ..... = 1·6.
„	May -	—	—	
„	June -	—	—	
51	February -	20	0·9	4·5 ..... = 1·5.
„	March -	18	1	5·5 ..... = 1·8.
„	April -	20	0·9	4·5 ..... = 1·5.
„	May - -	*	*	
„	June -	24	0·5	2 ..... = 0·6.
„	„ Chimney	—	0·25	
52	February -	24	0·7	2·9 ..... = 0·9.
„	March -	23	2	8·6 ..... = 2·8.
„	April -	18	0·49	2·7 ..... = 0·9.
53	February -	*	*	
„	March -	21	0·5	2·3 ..... = 0·7.
„	April -	20	0·4	2 ..... = 0·6.
„	May - -	70	1·5	2·1, pan and roaster.
„	June -	100	3·3	3·3 „ „
54	April -	25	0·8	Alterations making.
56	February -	20	0·9	4·5 ..... = 1·5.
„	March -	25	1	4 ..... = 1·3.
„	April -	25	1·1	4·4 ..... = 1·4.
„	May - -	Idle.		
„	June -	20	0·8	4 ..... = 1·3.
57	February -	50	0·3	0·6, pan and roaster.
„	March -	50	0·2	0·4 „ „
„	April -	100	4·0	4 „ „
„	May - -	70	1·1	1·5 „ „
„	June -	50	0·2	0·4 „ „
55	April -	30	0·4	1·3 ..... = 0·4.
58	March -	75	0·9	1·2, pan and roaster.
„	April -	70	3·1	4·4 „ „
59	February -	34	9·27	0·7 ..... = 0·2.
„	April -	30	0·1	0·3 ..... = 0·1.
„	May - -	Not decomposing.		
„	June -	„		
60	February -	100	0·2	0·2, pan and roaster.
„	March -	80	0·3	0·37 „ „
„	May - -	Not decomposing.		
„	June -	„		

Register Number.	Month.	Inlet Gas. HCl. Grains per cub. ft.	Outlet Gas. HCl. Grains per cub. ft.	Escape per Cent.
61	March	20	2·2	11·0 ÷ 3 = 3·6.
„	April	25	0·7	2·8 ..... = 0·9.
„	June	24	0·9	3·7 ..... = 1·2.
63	February	44	0·3	0·6, pan and roaster.
„	March	40	0·2	0·5 „ „
„	April	45	0·25	0·5 „ „
„	June	40	0·4	1·0 „ „
64	February	14	0·3	2·1 ..... = 0·7.
„	March	15·5	0·28	1·8 ..... = 0·6
„	May	16	0·3	1·8 ..... = 0·6.
67	February	20	0·2	1 ..... = 0·3.
„	March	24	0·25	1 ..... = 0·3.
„	April	25	0·28	1·1 ..... = 0·26.
„	June	20	0·28	1·4 ..... = 0·4.
70	February	24	0·2	0·8 ..... = 0·2.
„	March	26	0·4	1·5 ..... = 0·5.
„	April	25	0·3	1·2 ..... = 0·4.
„	May	25	0·2	0·8 ..... = 0·2.
„	June	26	0·4	1·5 ..... = 0·5.
94	March	70	1·2	1·7, roaster and pan.
„	April	75	0·5	0·6 „ „
101	February	66	1·7	2·5 „ „
„	March	508	0·6	1·1 „ „
„	May	398	1·02	0·25 „ „
„	June	390	2	0·5 „ „
107	March	20	0·3	1·5 ..... = 0·5.
„	April	15	0·2	1·3 ..... = 0·4.
„	June	20	0·56	2·8 ..... = 0·9.
108	January	28	1·6	5·7 ..... = 1·9.
„	March	40	6·2	15·5, pan and roaster.
„	April	30	1·6	5·3 „ „
„	June	20	0·2	1 ..... = 0·3, roaster.
114	February	25	1	4 ..... = 1·3.
„	March	20	0·8	4 ..... = 1·3.
„	April	22	0·7	3·1 ..... = 1
„	May	Not decomposing.		
„	June	„		
115	February	25	0·4	1·6 ..... = 0·5.
„	March	20	0·3	1·5 ..... = 0·5.
„	April	24	0·2	0·8 ..... = 0·2.
„	June	20	0·3	1·5 ..... = 0·5.
116	March	25	1·1	4·4 ..... = 1·4.
„	April	20	1	5 ..... = 1·6.
„	May	20	0·5	2·5 ..... = 0·8.
„	June	Idle.		

Escape of Hydrochloric Acid since June 30th 1874.

Register Number.	Inlet Gas. HCl. Grains per cub. ft.	Outlet Gas. HCl. Grains per cub. ft.	Escape Per cent.
50	20	0·2	1 ÷3=0·3
,,	25	0·33	1·3 =0·4
,,	20	0·9	4·5 =1·5
,,	18	0·7	3·8 =1·2
,,	20	0·4	2 =0·6
51	24	0·4	1·6 =0·5
,,	Chimney	0·14	
,,	18	0·8	4·4 =1·4
,,	24	0·3	1·2 =0·4
,,	20	1·5	7·5 =2·5
,,	20	0·28	1·4 =0·4
,,	Chimney	0·09	
,,	24	0·5	2 =0·6
52	20	0·5	2·5 =0·8
,,	40	0·6	1·2 =0·4
,,	43	0·7	1·6 =0·5
,,	30	0·3	1 =0·3
53	50	1·1	=2·2
,,	70	1·3	=1·8
,,	75	0·2	=0·2
,,	70	1·02	=1·4
56	25	2·2	8·8 =2·9
,,	30	5·6	18·6 =6·1
,,	20	0·8	4 =1·3
,,	25	3·0	12 =4
58	Chimney	0·22	
,,	,,	0·33	
,,	,,	0·30	
114	25	5·2	2 =0·6
,,	20	0·5	2·5 =0·8
,,	20	1·0	5 =1·6
101	350	0·8	0·2
,,	390	0·8	0·2
,,	380	0·8	0·2
,,	Chimney	0·09	
,,	,,	0·05	
,,	,,	0·1	
107	25	0·6	2·4 =0·8
,,	25	1·1	4·4 =1·4
,,	30	0·2	0·6 =0·2
,,	24	0·8	3·3 =1·1
,,	20	0·3	1·5 =0·5
,,	25	1	4 =1·3
,,	35	1·7	4·8 =1·6
,,	45	3	6·6 =2·2
115	20	0·4	2 =0·6
,,	24	0·5	2 =0·6
115	25	0·9	3·6÷3=1·2
,,	20	0·3	1·5 =0·5
116	20	0·7	3·5 =1·1
,,	25	0·3	1·2 =0·4
,,	25	2·5	10 =3·3
,,	20	1·2	6 =2
122	23	1	4·3 =1·4
,,	20	1	5 =1·6
,,	25	1·2	4·8 =1·6
,,	24	2·3	9·5 =3·1
132	20	0·3	1·5 =0·5
,,	25	0·2	0·8 =0·2
,,	24	0·2	0·8 =0·2
,,	20	0·1	0·5 =0·16
57	100	3·8	3·8
,,	112	0·4	0·3
,,	100	0·8	0·8
,,	150	9·1	6
,,	Chimney	0·22	
,,	170	9·	5·2
,,	1,965	1·04	0·05
,,	Chimney	0·22	
55	20	0·1	0·5 =0·1
,,	25	0·2	0·8 =0·2
61	20	0·8	4 =1·3
,,	25	2·3	9·2 =3
,,	30	2·3	7·6 =2·5
,,	35	3·	8·5 =2·8
63	45	0·8	1·7 =0·5
,,	40	0·9	2·2 —0·7
,,	45	0·8	1·7 =0·5
,,	43	1·0	2·3 =0·7
64	20	0·4	2 =0·6
,,	25	0·2	0·8 =0·2
,,	30	1·8	6 =2
,,	20	0·8	4 =1·3
67	20	0·3	1·5 =0·5
,,	24	0·2	0·8 =0·2
,,	25	0·28	1·1 =0·3
70	20	0·3	1·5 =0·5
,,	23	0·27	1·1 =0·3
,,	25	0·2	0·8
94	215	1·6	0·7
,,	200	0·4	0·2
,,	210	0·5	0·2
,,	200	0·5	0·2

DISTRICT No. 4.
Summary for 1874.—Charles Blatherwick, M.D.

Register Number.	Total Quantity of Salt decomposed during the Year.	Quantity of Salt decomposed in 24 Hours.	Number of Furnaces usually at Work.	Average Escape of HCl in Grains per Cubic Foot.	Area of Exit Chimney.	Speed of Chimney. Feet per Second.	Condensing Space for each Furnace.	Strength of Acid, Tw. Hydr.	REMARKS.
72	Tons. 200	Cwts. 10	1	·03	28		960	32 T	But little work done. 190 tons cylinder. 10 in roaster.
73	388	30	1	·085	28	5	1200	34	Work slowly.
76	96	30	1	(Cylinder and Bottles.)	16			36	200 tons of sulphate have been calcined, not decomposed.
77	190	30	1	·02	16		900	32	500 tons of salt cake have been roasted as well.
78	No salt decomposed during last year.								
79	28127	1780	20	·24	226·98	2	1250	34	*See* Report.
80	4599	220	3	·13	25	8·5	1764	28	Ditto.
81	80	?	1	·05	20		1620	28	Very little salt decomposed.
82	1784	200	2	·09	24	6	1600	30	*See* Report.
83	5453	288	3 or 4	·5	25	8	1420	24	Ditto.
119	1799	118	2	·10	16		1778	24	Ditto.
117	1310	84	1	·095	18		900	30	Ditto.
106	3161	190	3	·15	24	9	950	32	Ditto.
105	Off	220					2000	30	Closed for extensive alterations.
95	1424	90	1	·12	20	7	1240	30	*See* Report.
128	1424	96	2	·065	20		1340	32	Ditto.
134	Off	120	2		18		1177	32	Closed for extensive alterations.
135	3210	120	2	·07	22		1427	32	*See* Report.

I enclose a Report on the works. Upwards of 220 visits have been paid, and more than 300 experiments conducted.

C. BLATHERWICK.

Nos. 72 and 77.—Decompose their salt in cylinders, occasionally roasting the sulphate. They are provided with sufficient condensing power in the shape of towers.

No. 76.—Also uses the cylinder process. The sulphate roasting was here performed so rarely, that no means have hitherto been taken for condensation. (The sulphate contains about 6 per cent of HCl.) I have now prohibited this, and a close furnace with condensing tower is being erected.

No. 73.—The condensation has always been good here. There was a slight rise in the escape which I traced to a worn-out furnace, a new one has been built. The pot gas goes straight into large bottles, and the roaster gas by a different flue into a tower condenser. Loss is sometimes 14lbs. HCl in 24 hours. Escape less than 1 per cent.

The proprietor is making some new arrangements to meet the requirements of the new Act.

No. 81.—Making alterations and many improvements in the sulphuric acid department.

No. 80.—Condensation on the average much as in 1873. A slight improvement however is manifest, and I attribute this to the introduction of a spray into the cisterns. The Weldon process and Glover's towers are here used in connection with the vitriol manufacture. I calculate the escape here to be ·22 per cent.

No. 82.—Condensation satisfactory. A small permanent aspirator is attached to the chimney, and a weekly record kept of the waste gases. Escape 1 per cent.

No. 83.—The test glasses described fully in a previous report, are still in use here. On the whole the condensation is satisfactory. When there is an escape it is from the furnaces, and on one occasion there was an unusually high escape, which was subsequently traced to a defective bed. The proprietor has made an improvement here by conducting the gas escaping from the doors (during shifting), &c., by means of hoods, through a flue to a small hopper condenser, where the gases are washed before entering the chimney. A good plan also is here adopted in placing a cistern on a high level; water is run into this just as the gas leaves the pot, and every 24 hours some 40 cubic feet of acid at 24° T can be run off straight to the acidulating vats without the trouble and expense of pumping.

The per-centage of escape here is ·86.

No. 119.—Working steadily and condensing satisfactorily. New condensers are in progress, and there appear to be sufficient means for the proper condensation of all the waste gases. The manager computes that they make 99·26 cubic feet of acid at 24° T for one ton of salt decomposed.

Some furze plants immediately adjoining this work appeared to have been destroyed by noxious vapours. An examination however did not quite decidedly point to this. They were neutral, but the rain might have caused this; there was much chloride, but the vicinity of the sea might account for that. Escape about 2 per cent.

No. 117.—Satisfactory condensation. Proprietor now making improvements in the vitriol department to meet the demands of the new Act.

No. 106.—No material change here. The chimneys are regularly tested by the resident chemist, and the proprietor has been cautioned about his liabilities under the new Act. He is making improvements. (Escape 2·5 per cent.)

Nos. 105 and 134.—Have been under extensive alterations and enlargements during the whole year. 105 will shortly commence with Hargreaves' process.

No. 95.—Loss here invariably from furnace. The manager appears to be prepared for the new Act. On one occasion loss was 1·5 cwt. in 24 hours. Furnace repaired since. Escape under 3 per cent.

No. 135.—They have ample means for condensation here. A quantity of weak acid is run direct into the sea. The furnaces have been idle for some time, and at my suggestion the proprietor has led his waste HCl gas from condenser into chimney. The work has been slight of late, and my experiment showed a loss of ·075 per cubic foot.

No. 128.—There are now three decomposing furnaces here, the third having been erected so as always to have two in good working order.

I am glad to be able to speak of some improvements.—1st. There is a supplementary or post condenser, 4 feet square, 30 feet high, into which both of the primary condensers work, and through which a half-inch tap, at high pressure discharges water constantly. 2nd. In connection with the new furnace two new acid receivers have been erected. The gas from furnace and pot passes through these before reaching the tower. The proprietor proposes also to erect a stalk of 12 inch pipes between these two receivers. (*See* sketch 128.)

The new thick pipe used here to take the HCl gas from pot answers well. Only one length has cracked, and that was due to the iron hoop (shrunk round the body) having given way at the weld (*See* sketch, fig. 1). Average condensation good.

No. 79.—There is an improvement here. The average amount of HCl escaping in chimney, has been reduced from 0·31 to 0·18 grains per cubic foot. A great number of experiments were made, and the variation was very great, as high as 0·7, and as low as 0·02. A fairer average was got by using more continually a large 9 cubic feet aspirator. This is permanently attached to the chimney, some 35 feet above the base, and it is at this spot that all the experiments were made. I refer the improvement to greater care in working the furnaces, and to an improved arrangement of flues, condensers, and furnaces.

A large wash-tower is also in course of erection, and will be finished in a few days. All the condensers will be drafted through this, and the gases washed by a constant stream of water. It is probable that most of the HCl perceived in the town, comes from the furnace doors in shifting the charges, &c.; so I am anxious that hoods should be tried.

For average escape of HCl from condensers, *see* page 26.

The quantity of HCl in flues is as follows :—

West house	0·26 grs. per cub. ft.
Cylinders	0·12 „ „
Park	0·16 „ „

The speed and area of flues.

	Area sq. ft.	Feet per sec.
West house	11·68	16·4
Cylinders	13·5	8·3
Park	11·	7·1

The corrections for temperature as given by Mr. Fletcher have been used.

Quantity of salt decomposed in 24 hours = 89·15 tons.
or (allowing 10 p. c. for impurities = 50·06 „ HCl.

HCl. escaping in flues.

	Average Tons.
West house	0·274
Cylinders	0·074
Park	0·0745
	0·4225

$$\frac{0\cdot4225\times100}{50\cdot06}=\cdot844 \text{ p. c.}$$

West house chimney.

Average speed, as determined by the anemometer and corrected for temperature = 1·9289 feet per second

(*See* particulars under "Speed of Flues.")

Area 226·98 0·16 grs. HCl. per cub. ft.

$$\frac{226\cdot98\times0\cdot16\times1\cdot9289\times3600\times24}{7000\times112\times20}=\cdot386 \text{ tons} = \cdot772 \text{ p. c. of loss.*}$$

Speed of Flues.

In the last report I said "& scarcely think the results from the "anemometer trustworthy," meaning, that the conditions under which it is tried vary so infinitely, that we can only approximate a speed, and even this requires considerable patience.

You challenged this inference; I then took from the figures I sent, and say, "it is confirmatory of the value of this mode of measurement "instead of against it," because there was perfect steadiness at one point. But it is speed and not steadiness that is required, and the averages of the distances which should represent the correct speed, do not always tally with the steady point. Indeed I have found that there

* This refinement has not lasted.

is not only great variation in the speed with regard to the depth of the flue, but also throughout its entire length at the same depth.

The measurement of the speed of the West house chimney in work No. 79 has baffled us for a long time, but I think we have now obtained it. The three modes adopted agree in a remarkable manner. The large coloured diagram is extremely interesting. It shows at a glance the peculiarity of the current, and where the highest speed is. The figures indicate the actual speed. In the "table" annexed you will see the results of the testings, the area of the rings calculated, &c. I have to thank the proprietors for helping me to get these facts.

Comparison of Flues and Chimney Speeds.

Flues.	Area. Square feet.	Speed. Feet per Second. (Corrected).	Cubic feet per Second.
West House (W.)	11·68	16·4	191·552
Cylinders (S.)	11·68	10·26	119·836
Air (N.)	11·68	6·	70·080
Drying bed (E.)	3·	10·26	30·780
Total	38·04		412·248
Chimney	226·98	1·9289	425·996
Flues			412·248
	In favour of Chimney		13·748

Experiments on Speed of Draught in Chimney.

1. By F. Anemometer, the mean speed being calculated from the results obtained as shown by annexed Table of figures (p. 26).
2. By balloons.
3. By calculating speed of air in flues, reduced to increased area of chimney.

2. With balloons,

Height of chimney, 280 feet.

Paper (large sheet tissue paper) passed out at top in $2\frac{1}{2}$ minutes.

$$\text{Paper } 2{\cdot}5 \times 60 = \frac{280}{150} = 1{\cdot}866 \text{ feet per second.}$$

3. Calculation.

Total area of flues 38·04. Total gas passing 412·248 cubic feet per second.

$$\frac{412{\cdot}248}{38{\cdot}04} = 10{\cdot}848 \text{ average speed of all the flues.}$$

$$\frac{10{\cdot}848 \times 38{\cdot}04}{226{\cdot}98} = 1{\cdot}812 \text{ speed of chimney.}$$

TABLE of TESTINGS of SPEED of HOT GAS passing through West House Chimney. Tested at 30 feet from base at 8 points of its circumference at each 6 inches of its radius.

Area of rings 6″ broad × average speed ÷ total area = average speed.

—	East.	N.E.	North.	N.W.	West.	S.W.	South.	S.E.	Average Speed.	Area of Rings.	Cubic feet per Second.
1	3·72	3·72	3·83	·9	2·38	1·27	1·27	3·5	2·47	25·92	64·022
2	4·03	4·51	4·51	3·38	1·27	1·27	2·39	4·04	3·15	24·35	76·702
3	3·49	4·33	5·71	3·25	1·80	3·13	2·39	4·86	3·62	22·77	82·427
4	2·85	4·33	6·06	3·25	1·27	2·39	3·5	4·51	3·52	21·21	74·659
5	3·25	3·72	5·34	2·39	1·27	2·39	3·13	4·69	3·27	19·63	64·190
6	3·25	2·85	5·56	2·85	·9	2·39	3·5	4·51	3·22	18·07	58·185
7	2·53	2·02	4·51	2·71	1·56	2·39	2·02	3·72	2·68	16·49	44·193
8	2·2	1·28	4·04	0·00	0·00	2·39	2·02	2·55	1·81	14·92	27·005
9	2·2	0·00	3·72	2·02	1·56	1·56	2·02	2·85	1·99	13·36	26·586
10	1·27	0·00	2·02	2·39	0·00	2·02	0·00	2·55	1·28	11·78	15·078
11	0·00	1·56	2·02	1·28	0·00	1·28	1·56	2·39	1·26	10·21	12·864
12	0·00	3·	2·85	·9	0·00	1·28	0·00	2·39	1·3	8·64	11·232
13	2·55	1·28	2·02	1·28	0·00	1·81	0·00	2·39	1·41	7·07	9·968
14	·9	1·28	2·02	0 00	0·00	·9	2·02	2·39	1·19	5·49	6·533
15	1·27	1·28	2·02	·9	0·00	1·28	2·02	2·02	1·35	3·93	5·305
16	0·00	·9	1·27	0·00	0·00	2·02	1·56	2·02	·97	2·36	2·289
17	—	—	2·85	0·00	0·00	—	—	2·85	·71	·78	·554
										226·98	581·792
									Average	- - -	2·574

Correction for temperature 465° F 581·792 × ·7494 = 435·996.
2·574 × ·7494 = 1·9289.

Flues.—East 16·5 feet per second (hot).
West 24 „ „ „
North 10·26 „ „ „
South 15 „ „ „

AVERAGE ESCAPE of HCl from the CONDENSORS.

——	1.	2.	3.	4.	5.	7.	8.	9,	10.	11.	13.	14.	16.	18.
Jan. -	1·42	·24	·43	·71	1·3	·55	·22	·4	·24	·51	·35	·14	·44	·59
Feb. -	·18	·37	1·73	·24	·27	·27	·21	·26	·27	—	·28	·15	·56	·24
March -	·15	1·25	—	—	—	—	—	—	—	1·84	—	—	—	—
April -	·24	—	—	—	·5	—	—	·4	·35	—	2·05	—	·17	1·
May -	·17	·05	—	·21	·13	·2	·15	·26	·12	·17	·19	·05	·18	·24
June -	·36	—	—	—	·19	·31	·21	·14	·36	·22	·19	·07	—	·5
July -	—	—	—	—	—	—	—	—	—	—	—	—	—	—
August -	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sept. -	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oct. -	·9	—	—	—	·31	·16	·16	·16	·37	·31	—	·25	·18	—
Nov. -	·1	—	—	—	·1	·12	—	·16	·17	·07	—	·1	·15	·2
Dec. -	·47	—	—	—	·27	·37	—	·22	·12	·24	—	·26	·18	·38

The chimney examined by Dr. Blatherwick presented greater variations than it is believed are usual and I requested Dr. Hobson to try another. This he did with the following results. The chimney was 10 feet internal diameter and the figures are given for every 6 in., measuring from the circumference.

Chimney at Prestolee.

Index Observations on the Anemometer.

	North Side.	South Side.
6 in.	0·064	0·006 in.
12 „	0·047	0·007 „
18 „	0·026	0·006 „
24 „	0·028	0·007 „
30 „	0·025	0·010 „
36 „	0·024	0·009 „
42 „	0·024	0·013 „
48 „	0·019	0·014 „
54 „	0·019	0·012 „
60 „	0·016	0·015 „

The next table gives the calculation and the velocity per second of each ring and of the average. It is not corrected for temperature. It is given as a proof a very uniform velocity :—

Inches.	Velocity in feet. N.	Velocity in feet. S.	Average velocity.	Diameter.	Area.	Area × velocity.
0	—	—	3·0	120—114	1,100	3,300
6	7·222	2·212	4·71	114—102	2,038	9,598
12	6·189	2·389	4·29	102—90	1,812	7,775
18	4·604	2·212	3·41	90—78	1,582	5,396
24	4·777	2·389	3·58	78—66	1,357	4,859
30	4·514	2·855	3·68	66—54	1,130	4,159
36	4·423	2·709	3·56	54—42	905	3,221
42	4·423	3·255	3·84	42—30	679	2,607
48	3·935	3·378	3·65	30—18	452	1,650
54	3·935	3·127	3·53	18—6	227	801·3
60	3·612	3·497	3·55	6—0	28	99·4
		Total area 120 in. diameter			11,310	43,466

$$\frac{43{,}466}{11{,}310} = 3{\cdot}84 \text{ average speed.}$$

HCl. in the Chimney.

Feet from Circumference.	South Side.	North Side.
1 grain per cubic foot	0·31	0·30
2 „ „	0·36	0·39
4 „ „	0·44	0·45

The deviations in the amount of acid shew most on the north, although all the acid entered by the south.

We cannot doubt that we may have a little difficulty, at least at the beginning, with some chimneys. We must get experience.

It will be seen that the change of velocity at different points is not found in every chimney. I requested Mr. Fletcher also to make a trial and he fixed on a chimney at St. Helen's, giving the following results :—

SUTTON ALKALI WORKS, ST. HELENS, 27th February 1875.

EXPERIMENTS in Chimney No. 1, to ascertain the speed at different parts. Internal diameter of Chimney, 8 feet.

Experiment.	Length of anemometer tubes inserted.	Anemometer reading.	Corresponding velocity.	Average velocity of ring.	Diameter of ring.	Area of ring.	Air passing through ring.
	Feet.	Inches.	Feet per sec.	Feet per sec.	Feet.	Sq. feet.	Cub. feet.
1	8·0	0·144	10·83	5·42	8·0—7·5	6·1	33·16
2	7·5	0·150	11·06	8·49	7·5—6·5	11·0	93·40
3	7·0	144	10·83	9·13	6·5—5·5	9·4	85·82
4	6·5	177	12·02	10·54	5·5—4·5	7·8	82·21
5	6·0	165	11·59	10·24	4·5—3·5	6·3	65·11
6	5·5	166	11·63	11·25	3·5—2·5	4·7	52·88
7	5·0	096	8·85	10·15	2·5—1·5	3·2	32·48
8	4·5	137	10·56	10·97	1·5—0·5	1·5	16·46
9	4·0	147	10·94	10·94	0·5—0	0·2	2·19
10	3·5	159	11·38				
11	3·0	161	11·45			50·2	463·71
12	2·5	145	10·87				
13	2·0	097	8·89				9·23
14	1·5	101	9·07				
15	1·0	068	7·44				Average speed.
16	0·5	043	5·92				
17	0·0	000	0·00				

The average is got by adding the speeds at the same distance from each side, and it will be seen also that it is obtained very closely by taking the speed at one sixth of the diameter from the circumference as is usually done. So also in the following :—

Afterwards a trial was made of a chimney at Runcorn.

EXPERIMENTS on Speed at different points in the same horizontal plane of a chimney 5 feet square at Runcorn Soap and Alkali Works. March 9, 1875.

No. of Experiment.	Length of anemometer tubes.	Anemometer reading.	Velocity of air.	Average velocity of air between points equidistant from centre of chimney.	Area of the ring or portion corresponding to the length of anemometer tubes.	Air passing through each ring or space per second.
No.	inches.	inches.	ft. per sec.	ft. per sec.	square feet.	cubic feet.
1	0	0·045	6·0567	7·823	4·75	48·9
2	3	0·113	9·590			
3	6	0·075	7·819	7·819	8	61·26
4	12	0·113	*c* 9·590	9·286	6	55·71
5	18	0·109	*b* 9·425	9·019	4	36·10
6	24	0·085	*a* 8·324	8·787	2	17·57
7	middle 30	0·092	8·660	8·660	0·25	2·20
8	36	0·105	*a* 9·250			
9	42	0·091	*b* 8·613		25	221·74
10	48	0·099	*c* 8·983			

$$\frac{221\cdot74}{25} = 8\cdot87 \text{ average speed.}$$

Some successful efforts have lately been made in St. Helen's to improve the appliances for condensing muriatic acid, and preventing its escape. The principal are Mr. Gamble's salt-cake furnace, the introduction of thin glass pipes for the conveyance of hot acid gases, and the use of improved hoods over the charging doors of salt-cake furnaces.

Mr. Gamble's salt-cake furnace is a close roaster or muffle furnace heated by gas, and so arranged that the pressure in the combustion spaces is greater than that inside the muffle or inner chamber where the salt-cake is roasted. The consequence of this is, that if there are any cracks or leaky places, either in the middle arch or in the bed, the passage of air is not from the roasting bed into the fire flues and thence to the chimney, but from the fire flues to the roasting bed and thence to the muriatic acid condensers. By careful adjustment of the damper in the flue leading to the chimney the pressures on the inside and on the outside of the middle arch can be made so nearly equal that there is very little passage of gas in either direction, even if the brickwork is somewhat leaky. This increased pressure in the combustion chambers of the furnace is kept up by admitting the gas under pressure from a "producer" as commonly constructed, and by admitting the air necessary for its combustion through a nest of vertical iron pipes nine feet long. These are warmed by the waste heat from the furnace. In this way a saving of heat is effected, and the ascending force of a nine-feet column of hot air is gained.

Mr. Gamble has erected three of these furnaces; one of them has been at work for two years, and has required no repairs during that time.

The expense of fuel is said to be the same as in the case of a close furnace fired direct.

The accompanying drawing kindly supplied by Mr. Gamble shows very clearly the details of construction.

The trade owes the suggestion of glass tubes to Mr. Alfred E. Fletcher of No. 1 District. The reports I have received point them out as having proved entirely successful. Mr. Fletcher says—

"*Glass instead of Earthenware.*—The thin glass pipes for conveying hot muriatic acid gas have been well tried in St. Helen's, and show many advantages over the earthenware ones, in that they do not crack so readily with the heat, and cool the gases more effectually. They have been used for conveying gas both from the decomposing pots and from the close roasters.

One range that has been at work for many months, was exposed during the winter to both snow and rain, there was no roof over it. Experiments have been made to ascertain the rate of cooling per yard of pipe. Two ranges of pipes each 100 yards long were examined, the temperature at the hot end was 310°, that at the cooler end 134° Fahrenheit, showing that the cooling went on at the rate of 0·59° Fahrenheit per foot. This would depend on the quantity of gas passing, of course. The temperature of the day was 45°. The quantity of acid condensing in the pipes was

not great, when however a fine jet of water was introduced at the hot end, two-thirds of the acid was condensed."

Mr. Kynaston of St. Helen's says: "My experience with the "glass pipes for the conveyance of hydrochloric acid has been very "satisfactory. We use them for the conveyance of both pot and "roaster gas from close furnaces, and they will stand the alterna-"tions of heating and cooling better than any earthenware pipes "we have tried, whilst their cost is not greater per yard than "earthenware pipes of the best quality. We have now at work "several lengths of pipe which have been in almost constant use "since May last. I believe that glass pipes will be eventually "used to the exclusion of all others for the horizontal portion "of the range for conveying muriatic acid from close furnaces."

Mr. Hazlehurst has not had so much experience with them, but has the same opinion, mentioning that the fixing must be made carefully to prevent breakage. My own observations are most favourable to them, and as every chemist, and we may say every person knows, glass will not allow the passage of fumes; and when earthenware pipes are found fuming along the whole length, these glass pipes are found without a trace of gas around them. The junctions, however, may leak exactly as the junctions of the other pipes. These junctions can be cured when the pipes themselves cannot.

Hoods.—At the Bridgewater works St. Helen's, large wooden hoods have been erected over the charging doors of the salt-cake furnaces. A flue leads from the top of the hood to a smoke culvert, so that any escaping vapour is drawn to the chimney. These hoods are much larger than those which have been used before, they measure 14 feet by 7 feet at the bottom, and are 18 feet high. The flue to draw off the vapour from the point of the conical hood is 18 inches square. They answer the purpose much better than the smaller hoods which have hitherto been tried, and keep the sheds very free from muriatic acid gas. The quantity of acid which rises from a charge of salt-cake is however very small when spoken of as a per-centage of that originally contained in the salt. Since the erection of these hoods Mr. Fletcher has measured it, and found it to be on one occasion $\frac{1}{160}$ of one per cent., at another time it was $\frac{1}{90}$ of a per cent.

Mr. Fletcher has made a drawing of the hood as attached to the furnace.

Hoods hitherto have been of little value for want simply of magnitude, and we must thank Mr. Leather for this improvement. His hoods have one fault, but it is more of principle than practice. The draught from the hoods is into the chimney, it would be better into the condenser. The current however of gas is so small that it does not affect the chimney perceptibly, although it would be disagreeable to those standing near at the time of its escape from the furnace into the air at the usual level of the human head.

Estimation of Nitric Acid.

The removal of the acids from the air before it escapes from the chambers, is of the highest importance to the manufacture, and it is equally so to the public The use of Gay Lussac's tower and other precautions seem to retain the nitrous fumes to an extent which in many cases must be called quite as much as can be desired. The best mode of estimating the escape has been considered, and many experiments tried. A list follows of results after collecting in water and in bi-chromate of potash. When the amounts are small these methods may be sufficient, and if taken out by the flexible aspirator and shaken along with the solution, there is no important loss, otherwise it is appreciable; and when the density of the fumes is great, the loss is also great, and such as would render the analyses of little value.

The method which hitherto has proved itself the most rapid is by the use of peroxide of hydrogen.

When red nitrous fumes are passed into it they disappear at once, care being taken that the amount of peroxide is sufficient, and the speed of passage not too great. If the amount should be very great, the use of the flexible aspirator, and of shaking, a method so frequently spoken of, finishes the process of absorption in a few seconds. Permanganates will act also, but they introduce coloured bodies.

When the amount of nitrous gases is examined in this way, the estimation is the same of course as for nitric acid, in other words the oxides are converted into the higher oxide. I have no results from works by the peroxide of hydrogen process. The following are inserted to show what may be done. I believe the numbers will be a little higher when the new process is tried, but experiments even with pure water show that it absorbs so much of the oxides of nitrogen that the following experiments cannot be wrong, except in a very small degree.

NITRIC ACID in EXITS of SULPHURIC ACID or VITROIL CHAMBERS in ALKALI and other CHEMICAL WORKS.

Grains HNO_3 per Cubic Foot.	Remarks.	Solution in which the Gases were dissolved.
0·3009	- - -	Potass. dichrom.
0·0753	O. V. culvert -	„ „
0·0842	- -	„ „
0·1112	- -	„ „
0·0487	- -	„ „
0·0293	- -	„ „
0·0711	Smell of oxides of N. -	„ „
0·0823	- -	„ „
0·0307	- -	„ „
0·0770	- -	„ „
0	- -	„ „
0·0226	- -	„ „
0·0659	- -	„ „
0·0486	Chamber flue -	„ „
0·0381	„ „ - -	Water.

Grains H. NO_2 per Cubic Foot.	Remarks.	Solution in which the Gases were dissolved.
0·2577	Contains free SO_2	Potass. bichrom.
0·0451	" "	" "
0·0594	" "	" "
0·0141		" "
0·0680		" "
0·0157	Exit from covered vitriol pan	" "
0·0166		" "
0·0910		" "
0·0380		" "
0·0337		" "
0·0512		" "
0·0312		" "
0·0193		" "
0·0124		" "
0·0401		" "
0·0238		" "
0·0431		" "
0·0217		" "

NITRIC ACID in CHIMNEYS of ALKALI WORKS.

0·0011	Contains free SO_2	Potass. dichrom.
0·0074		" "
0		—
0		Potass. dichrom.
0·0055		" "
0·0055		" "
0·0067		" "
0·0022		" "
0		" "
0·0044		" "
0		" "
0		" "
0·0044		" "
0·0036		" "
0·0133		" "
0		" "
0·0486		Water.
0·0044		Potass. dichrom.
0·0067		" "
0		" "
0·0156		" "
0·0122	Flues from six vitriol chambers pass into the chimney.	" "
0·0600		" "
0·0343		" "
0·0022		" "
0·0086	Main flue	" "
0	"	Water.
0	" at entrance to chimney	Pot. dichromate.
0·0044	At foot of chimney	" "
0·0080	From retort room	" "
0·0044	Smoke flue	—

It is important to have a ready mode of deciding the amount of this acid, and many have been tried. It is necessary for us that the manipulation should not be great. The indigo process I had given up as a failure in very early days, but it was again tried at the wish of my assistant, Mr. Gillespie, with the following results. The presence of organic matter destroys all confidence, and in chimneys there is usually sufficient from the coal.

Indigo Process.

The following experiments show that by using various quantities of a pure solution of potassium nitrate to standardize the indigo solution different values are obtained for 100cc. The process, therefore, is valueless:—

Milligrammes of HNO_3. taken as KNO_3.	Volumes of H_2SO_4. added to the KNO_3. Solution.	Cub. Cents. of Indigo Solution used.	Value of 100cc Indigo Solution in Mgms. HNO_3.
1·166	1	9·3	12·82
1·166	1	9·3	12·82
1·166	2	7·0	17·15
1·166	2	7·0	17·15
2·332	1	16·5	14·30
2·332	2	14·3	16·60
3·499	1	24·0	14·70
3·499	2	19·0	18·71
5·830	1	27·5	21·35
5·830	1	28·0	21·05
5·830	2	30·0	19·63
5·830	2	30·0	19·63
11·666	1	78·3	14·90

Determination of Nitric Acid without Distillation.

The nitric acid was reduced by means of zinc and sulphuric acid; the sulphuric acid, diluted, was added in portions at a time, so that a brisk evolution of hydrogen was given off for about two hours. The ammonia formed was determined by Nessler's solution, without distillation, after making a portion of the acid liquid somewhat alkaline with caustic soda, and removing the precipitated zinc oxide. The amount of ammonia in the reagents used must be taken into account by making a blank experiment with them.

Milligrammes.		Grains.	
Taken.	Found.	Taken.	Found.
124·60	123·78	1·9228	1·910
124·60	119·51	1·9228	1·845
124·60	21·74	1·9228	1·879
62·30	55·59	0·9614	0·858
62·30	57·07	0 9614	0·881
62·30	67·81	0·9614	1·046
62·30	55·03	0·9614	0·849
62·30	56·52	0·9614	0·872
62·30	63·00	0·9614	0·972
31·15	37·06	0·4807	0·572
31·15	34·83	0·4807	0·537
12·46	11·86	0·1923	0·183
12·46	12·30	0·1923	0·190
6·23	6·67	0·0961	0·103
6·23	6·67	0·0961	0·103
1·16	1·48	0·0173	0·023
1·16	1·33	0·0173	0·020

This may be a satisfactory process for rapid work, but it is not exact. When great exactness is required the ammonia must be distilled. An alkaline process, such as the Schulze-Wanklyn method, with aluminum is capable of wonderful refinement, but takes longer time than the above.

The oxides of nitrogen between the dioxide and nitric acid oxidize sulphurous acid rapidly, nitric acid does not; indeed in some cases it appears to preserve sulphurous acid.

The results in the tables of experiments with nitric and sulphurous acids are not very regular; it will, however, be noticed that the largest proportion of nitric acid does not, as a rule, oxidize the sulphurous acid quicker than smaller proportions. To show this a rather long range of experiments has been copied out.

Nitric, Sulphurous, and Sulphuric Acids.

I.

Number of Hours before the SO_2 was determined.	Milligrammes.			Cubic Cents Water in which the Acids met.	Grains.			
	HNO_3	SO_2	SO_3		HNO_3	SO_2	SO_3	Water in which the Acids met.
			added to each				added to each	
	17·93	8·35	10·41	200	0·2767	0·1289	0·1606	3086
19		0				0		
43		0				0		
	17·93	16·70	„	200	0·2767	0·2579	0·1606	3086
19		7·07				0·1092		
43		0				0		
	17·93	33·40	„	200	0·2767	0·5158	0·1606	3086
19		23·59				0·3641		
43		14·29				0·2206		
	35·86	1·42	„	200	0·5534	0·0219	0·1606	3086
5		0·78				0·0210		
	35·86	1·67		150	0·5534	0·0258		2315
19		0				0		
43		0				0		
	35·86	14·23	104·10	200	0·5534	0·2197	1·6063	3086
45		0·39				0·0060		
	35·86	16·70	10·41	226	0·5534	0·2579	0·1606	3487
19		4·44				0·0685		
43		0				0		
	358·6	8·35	„	200	5·5339	0·1289	0·1606	3086
19		3·93				0·0607		
45		3·93				0·0607		

II.

Number of Hours before the SO_2 was determined.	Milligrammes.		Cub. Cents. Water.	Grains.		
	HNO_3	SO_2		HNO_3	SO_2	Water.
	3·58	3·47	90	0·0553	0·0535	1389
17		0			0	
	35·86	3·47	90	0·5534	0·0535	1389
17		0			0	
	358·6	3·30	80	5·5339	0·0509	1234
17		1·92			0·0297	
	358·6	4·40	90	5·5339	0·0679	1389
17		2·83			0·0437	
	Without HNO_3	3·30	80	Without HNO_3	0·0509	1234
17		0			0	
	Do.	3·47	90	Do.	0·0679	
17		0			0	

III.

Number of Hours before the SO_2 was determined.	Milligrammes.		Cub. Cent. Water.	Grains.		
	HNO_3	SO_2		HNO_3	SO_2	Water.
	3·58	11·01	100	0·0553	0·1699	1543
2		10·61			0·1638	
22		5·90			0·0910	
	35·86	11·01	101	0·5533	0·1699	1558
2		9·93			0·1532	
22		8·14			0·1256	
	358·6	11·01	110	5·5339	0·1699	1697
2		9·08			0·1401	
22		8·00			0·1235	
	896·5	11·01	125	13·8347	0·1699	1929
2		9·83			0·1517	
22		8·35			0·1289	
168		3·94			0·0609	
	1793·0	11·01	150	27·6695	0·1699	2315
2		8·94			0·1456	
22		8·84			0·1365	
168		6·78			0·1047	
	Without HNO_3	11·01		Without HNO_3	0·1699	
2		10·61			0·1638	
22		2·75			0·0424	

IV.

Number of Hours before the SO_2 was determined.	Milligrammes.		Cub. Cents Water.	Grains.		
	HNO_3.	SO_2.		HNO_3.	SO_2.	Water.
	139·2	10·6	101	2·149	0·1638	1559
15		8·7			0·1348	
69		5·6			0·0836	
	348·1	10·6	102	5·372	0·1638	1574
15		7·6			0·1176	
69		7·2			0·1114	
	696·2	10·6	105	10·745	0·1638	1620
15		7·6			0·1178	
69		7·6			0·1178	
164		6·4			0·0956	
	1392·5	10·6	110	21·490	0·1638	1697
15		7·8			0·1201	
69		7·3			0·1135	
164		5·4			0·0834	
	2611·5	10·6	105	40·295	0·1638	1620
15		5·7			0·0880	
69		4·1			0·0637	
	Without HNO_3	10·6	100	Without HNO_3	0·1638	1543
15		7·1			0·1092	
164		7·1			0·1092	

Action of Oxides of Nitrogen on Sulphurous Acid.

The Gas prepared by acting on Copper with HNO_3 was passed into water and a known amount of SO_2 was then added.

Hours standing before the SO_2 was determined.	Milligrammes.		Cubic Cents. Water in which the Gases were dissolved.	Grains.			Remarks after standing.
	Oxides of N calculated as HNO_3.	SO_2.		Oxides of N calculated as HNO_3.	SO_2.	Water in which the Gases were dissolved.	
	1·66	11·79	225	0·0257	0·1820	3472	
4		2·21			0·0341		No smell but decolorized Iodide of Starch.
23		2·21			0·0341		Do. do.
	4·26	5·89	115	0·0658	0·0910	1775	
4		2·26			0·0349		Do. do.
23		0			0		No smell and does not decolorize Iodide of Starch.
	4·84	23·58	192	0·0747	0·3640	2963	
4		15·10			0·2330		
23		11·33			0·1748		Smell of SO_2.
	47·65	5·89	110	0·7354	0·0910	1697	
4		0			0		
23		0			0		Smell of Oxides of N.
	97·79	11·79	68	1·5092	0·1820	1037	
4		0			0		
23		0			0		Do. do.
		11·79	169	Without Oxides of N.	0·1820	2623	
4	Without Oxides of N.	6·68			0·1031		
23		0			0		

Oxidation does not proceed quickly in a strong solution of sulphurous acid exposed to air.

10cc of a solution contained 11·79 mgms. SO_2.

In 24 hrs. 10cc „ „ „ 7·66 „ „

„ 27 „ 10cc „ „ „ 7·17 „ „

When diluted with water, containing of course oxygen, the amount of sulphurous acid diminishes rapidly. Manchester water was used.

10cc of a solution of SO_2 contained 9·63 mgms. SO_2.

10cc „ „ „ +50cc water „ 7·87 „ „

10cc „ „ „ +100cc „ „ 7.47 „ „

10cc „ „ „ +200cc „ „ 3·52 „ „

The amount of SO_2 was determined immediately after dilution. The part of the solution of SO_2 to which no water was added did not alter in strength during the experiments.

Apparatus for Condensation.

It is perhaps time for us to have some new ideas regarding condensation, and I expected this year to report some progress that might be important. There are, however, a few indications to be given of the character of the progress attempted that may be of value. The patent of Messrs. Newall and Bowman has been alluded to, and I should have described it more fully had it been carried out to its full extent. Instead of high tanks, the owners employ low chambers filled with a fine spray of water or weak acid; when the gas is cooled to a certain extent it passes through tubes from the first to the second chamber as in the plan. The advantage of this is the great exposure to the air and the rapid cooling, as well as the rapid admixture of the gas with water. I hope soon to have a thorough account of its results, but I said so on a previous occasion.

The first act will be to generate heat as usual, the thorough cooling in one vessel could not be attained with sufficient rapidity without adding more water than is desired, for this reason some of the gas is passed into a second vessel, becoming cooled partly on the way, and is subjected to another spray. (See plan A.) The final act seems best performed in a condenser filled with coke, bricks, or some substances which expose a large surface, the last form of the vapour seeming to require this agency as chemists well know.

The cooling of the gases presents many advantages. We then have only the heat of combination with water to deal with, and that is not subject to variations except so far as the acid varies in the amount of water, but the variation will be very regular. Another idea, however, is that it may be better to add the water of condensation to the warm gases, because then more heat will be generated at a time and the greater the amount of heat the more rapid will be the cooling. The objection to this may be that a high heat will weaken the acid, sending off a large portion of gas to be added to water at another stage; if however, only a portion of the water were added at a time the great heat would not be attained. This latter method would seem to be the idea carried out in the plans shown. If the heat could be got rid of in tubes instead of in towers or cisterns the speed would be still greater, and the use of tubes seems to be the favourite method adopted when the Hargreave's process of decomposing salt is employed. This process consists in decomposing common salt by means of the sulphurous acid direct from the sulphur kilns or burners, along with a certain amount of air and vapour of water. The heat is great as the whole of that caused by the combustion of the sulphur and iron of the iron pyrites, as well as that of combination must pass together through the condensing apparatus. This large amount of heat has caused a demand for more cooling, and this is found to be attained by numerous tubes. I have obtained a photograph of those at the Runcorn Soap and Alkali works. (See Fig. 7.) There are two long stone cisterns connected

by 18 sets of tubes, each set going up and down five times, so that the cooling surface is very large indeed. The gases go finally through the standing tower. In order to assist the gases through this long series a Root's blower is used which works in the acid at a heat high enough to prevent its destruction or at least its rapid wear. The length of cooling pipes used in the manufacture of acid generally, may be said to be constantly increasing, and although I have mentioned this system of pipes in connection with the Hargreave's process, I must not forget that one set has been in action some years at Mr. Gamble's and one at the Netham works, having been erected by Mr. Philip Worsley, for the ordinary purpose of condensation where common salt is decomposed.

A plan by J. Mather has lately been proposed; it consists of a series of troughs as seen at fig. 8. Air which has been compressed, and then I suppose allowed to cool to the ordinary temperature of the atmosphere, is driven in by the tubes marked H. At the same time it raises the water or weak acid into fine spray, as it is driven in by violence. It has not been found necessary to use all the plans sent, and the details must be imagined. The apparatus is said to be used either vertically or horizontally. I do not sufficiently know the amount of pressure and its influence, as the apparatus is not in use, so as to be able to judge of the cooling on one hand and the resistance on the other, but, so far as I know, the idea of sending in cold so as to absorb at once the heat of combination is a novel one, and its success must entirely depend on the price of cold. I have made inquiries into this subject, but the question seems still unsettled which is the best cooling apparatus. So far, however, as I can find, the cooling by expansion does not promise to be cheap. The range from the ordinary temperature to boiling, say 60 to 212 is 152° F., or from 15°·5 to 100° C. is 84·5, whilst the range from 60 F. to freezing, or 15·5 to freezing including the latent heat is 170° or 95° C. It will therefore take not far from a ton of ice to absorb the heat required to raise the same amount of water to boiling. The manufacture of nearly a ton of ice, or its equivalent in cold, so to speak, by the expanding engine would be a rather troublesome process if as I suppose something like half the heat of combination must be got rid of artificially. Even that is enough from a ton of salt to raise the temperature of a ton and a half of water from 60 to boiling. There is also the heat of the gas besides. It may also be remembered that increase of air is not in favour of condensation of gases for mechanical reasons.

As to cooling before condensation, a great deal has been said on this point. I must mention a plan by Mr. Steele at Runcorn; he passes the tubes through a cistern of water and the rapidity of cooling is great. (See fig. 9.) It is found that 24 feet lower the temperature of the gas of one furnace from 478° F. to 362° or 116° F. = 64·4° C., or 4·5° F., or 2·8° C. per foot.

There can be no doubt that cooling is best effected in narrow vessels or channels, with large external surfaces in proportion to the

capacity, but when I bring forward these facts, I do not at all mean to say that the towers have failed. Indeed, I know no better condensation than is made quietly in one tower for a pan and furnace, but the work done is not excessive and the cooling of the tower is therefore sufficient. An increase in the quantity, efficiency, or rapidity of the work demands new appliances.

Let us take an example of actual condensation with ordinary towers. In a work at St. Helens 11 cwt. of salt are used every two hours = 132 cwt. in 24 hours, and containing, as it is not quite pure, 57·7 per cent. in 76·164 cwt. of dry HCl = 253·88 cwt. or 12·694 tons of acid of 30 per cent. and 1·155 specific gravity.

A stone tank is near the pan and roaster, into which some acid falls at 46° C.; about $\frac{1}{3}$rd cubic foot of 1·42 specific gravity when cool is found here. It is very impure. No. 2 tank contains 48·1 cubic feet of acid of 31 per cent. and 32° C., or 1·543 tons.

The tower is reached by acid gas of 60° C. or 140° F., and from it, after water of the ordinary temperature is supplied, there are about 400 cubic feet of acid of 29 per cent. and of a temperature of 54·5° C.

It is seen that even if the temperature is reduced to 60° C. the amount condensed without adding water is only one-eighth of the whole, and the temperature must rise in the tower higher than 54·5°, but how much in the centre is not clear, probably only a few degrees above the issuing acid.

The gases were found to contain grains in a cubic foot—

	Water.	Acid.	Grammes per C. Met. Water.	Acid.
From the pot - -	484·72	660·69	1109·27	1511·9
„ roaster - -	19·38	133·07	44·35	304·5
„ outlet to the tower	22·66	128·20	51·86	293·4

In another experiment—

	Water.	Hydrochloric acid.		
From the pot - - -	63·80	56·66	146·00	129·66
„ roaster - -	·64	28·60	1·46	65·45
„ outlet to tower -	7·10	16·53	16·25	37·83

Temperature of gas from pot - -	180° C.
„ „ furnace -	315° C.
„ „ entering tower	60° C.

It is clear that the smallness of the condensation is not due to the want of cooling only, if at all, but to the want of water. The roaster vapour in the first experiment has only 12·6 per cent. of water vapour instead of 70, and the outlet has almost the same, viz. 15 per cent. The supply of water is given in the tower, and the heat of combination and condensation are evolved there. We should expect every experiment to differ according to the state of the charge.

This points to modes of condensing alluded to where the large tower which does not so easily part with its heat is displaced by small vessels.

One may believe it quite possible to get rid of the heat of combination much earlier by still smaller vessels than any one

uses and more frequent supply of water, or one may suppose only the tubes to be used and supplied at frequent intervals with moisture. In some such direction we must seek for condensation in a shorter space and in a more inexpensive as well as effective manner.

At the same time it must be confessed that the success is not to be had in a moment. It will be seen that the amount of water along with the gas is not quite regular; this might be got over as it is always small, and must be from the very nature of the usual process. The tower in its capacious interior equalises all by holding water and gas for some time together, and it would seem that a tower must finish the process so far as we know. This irregularity and consequent difficulties do not occur with the Hargreaves process.

Effect of Acid Vapours on Health.

In my last report I gave a chapter on the effect of gases from alkali works on human health, and after saying that the information was meagre but all I could find, I came to the conclusion, sufficiently temperate in expression (p. 52):

"I should infer from this that zymotic diseases and lung "diseases are not removed by the gases of chemical works, but "that none of the places exposed to them are so much affected "(*i.e.*, by these diseases) as the dense parts of cities."*

The general conclusion is that gases from chemical works are hurtful to the health, but are neither the worst causes, as some have supposed on the one hand, nor are they the disinfecting or curative agents which some have supposed on the other.

I shall not go into details of objections to my conclusions because I think this is not a proper place to maintain public discussions, and so little bigotry have I in the matter, that I do not care if I am proved to be wrong by a larger amount of information than I have obtained. I should by no means think this a disgrace, because the subject cannot be begun with correct conclusions but must gradually unfold itself, probably with many rises and falls. I grant that it may be wrong to draw any very decided inference from the statistics of South Shields, unless manipulated with great exactness. This process, however, produces in itself frequent uncertainties and suspicions, and I do not enter upon it. I can, however, readily believe that the population of a seaport is exceedingly difficult to bring under exact rule. With the full belief that I shall again be held as bringing out meagre statistics, I shall produce some from a district of all others most exposed to the fumes from alkali works.

* I marked one figure as doubtful in order that I might correct it in the proof, and I did not, but it stands with the query annexed, it is the amount of phthisis and also lung diseases, the first was left out. The number for both is 5·987 per thousand for all England and in the districts spoken of, the amount ranges to 7·, still agreeing with my conclusion.

DEATHS in 1,000 Deaths at Widnes for five Years ending September 12th, 1873, and in all England 1869–1872.

	Widnes.		England.			
	Five Years.	In 1872.	1872.	1869.	1870.	1871.
Phthisis - -	64·46	65	107·619	106·422	106·106	104·481
Bronchitis - -	78·62	53	87·489	89·346	91·369	93·342
Laryngitis -	6·3	6	3·135	3·374	3·405	3·191
Pneumonia -	95·12	100	41·505	51·401	46·427	44·567
Asthma - -	0·23	6	6·100	7·541	7·619	6·884
Lung disease -	15·70	9	9·964	10·009	9·959	10·359
Scarlet fever and scarlatina.	61·29	59	24·397	56·279	63·672	36·344
Whooping cough -	14·94	15	28·253	22·327	23·285	20·279
Small-pox - -	4·72	9·4	39·074	3·186	5·126	45·268
Total -	335·71	322·4	317·536	349·885	356·968	364·715

Now I do not care to draw conclusions wholesale, but two points strike me as interesting. 1st. That bronchitis cannot be considered high, being less than in 1872 for all England, which year had not a very large amount. 2d. That scarlet fever, which gases might be supposed to disinfect, is very high whilst whooping cough, which the gases when strong are supposed to cure, is low. As to the general health I do not think five years of such a population as that of Widnes to be a standard for reasoning from, it is frequently changing, there are many young people moving to it for work, or leaving when work is slack, and one can best judge from the character of the complaints incident to the place from those diseases which attack people who are not mere weaklings.

I obtained from the registrar the deaths for the winter months when the fogs containing the acid in the largest amount exist, but have no figures with which to compare them.

I am, &c.,

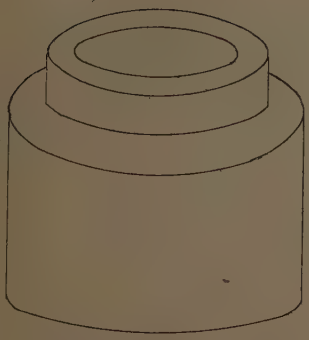
R. ANGUS SMITH.

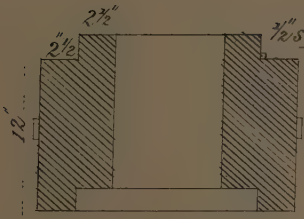
See p. 5.—When I write thus, claiming perhaps too little for our labours, I ought not to forget that my colleagues, inspectors for the separate district, have a right to have their opinions recorded. Mr. Fletcher tells me that about two years after the passing of the Act, two proprietors, or their agents, showed him trees that had been marked for felling, but from their revival were retained, and in one of the districts at least are now flourishing. He mentions also a large estate which he considers to have been saved by the Act, and it certainly is my opinion that the trees must have gone to destruction long ago had the Act not existed, even without the increase of works, but most certainly with it.

N° 1

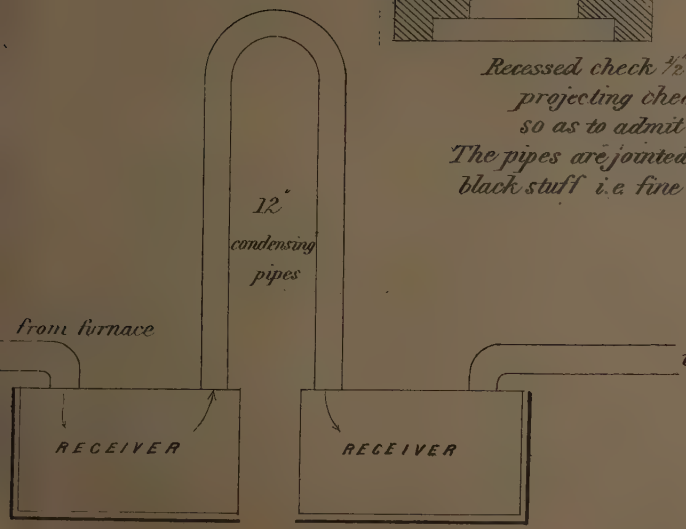
See Dr Blatherwick's Report

New large thick Pipes to take the H Cl from Pot





Recessed check ½" shallower than projecting check at other end so as to admit ½" iron ring.
The pipes are jointed with well worked black stuff i.e. fine clay and tar.



PLAN OF NEW ASPIRATOR FIXED ON WEST HOUSE CHIMNEY,

See Dr. Blatherwick's Report January 30th 1874.

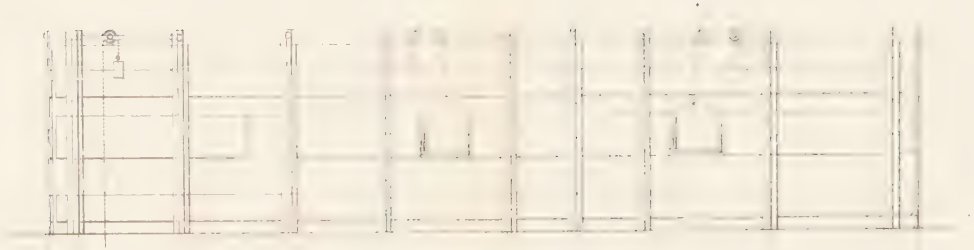
FRONT ELEVATION.

Scale ¼ Inch to the foot.

N° 3

SALTCAKE ROASTER HEATED BY GAS.

AT HARDSHAW BROOK CHEMICAL WORKS, ST HELENS.



SIDE ELEVATION

CROSS SECTION

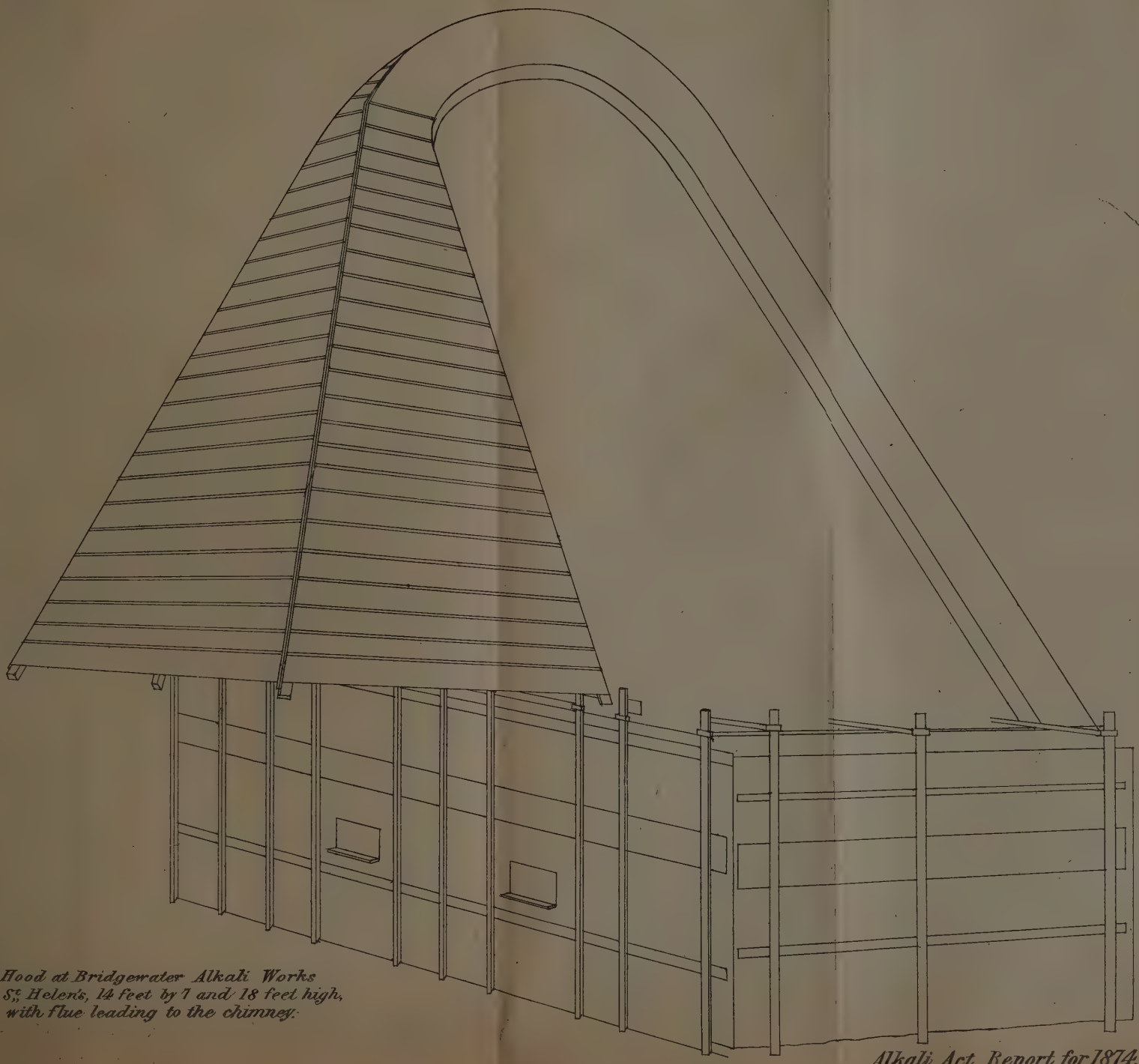
CROSS SECTION

PLAN

LONGITUDINAL SECTION

Scale Half of an Inch to the Foot.

N°. 5

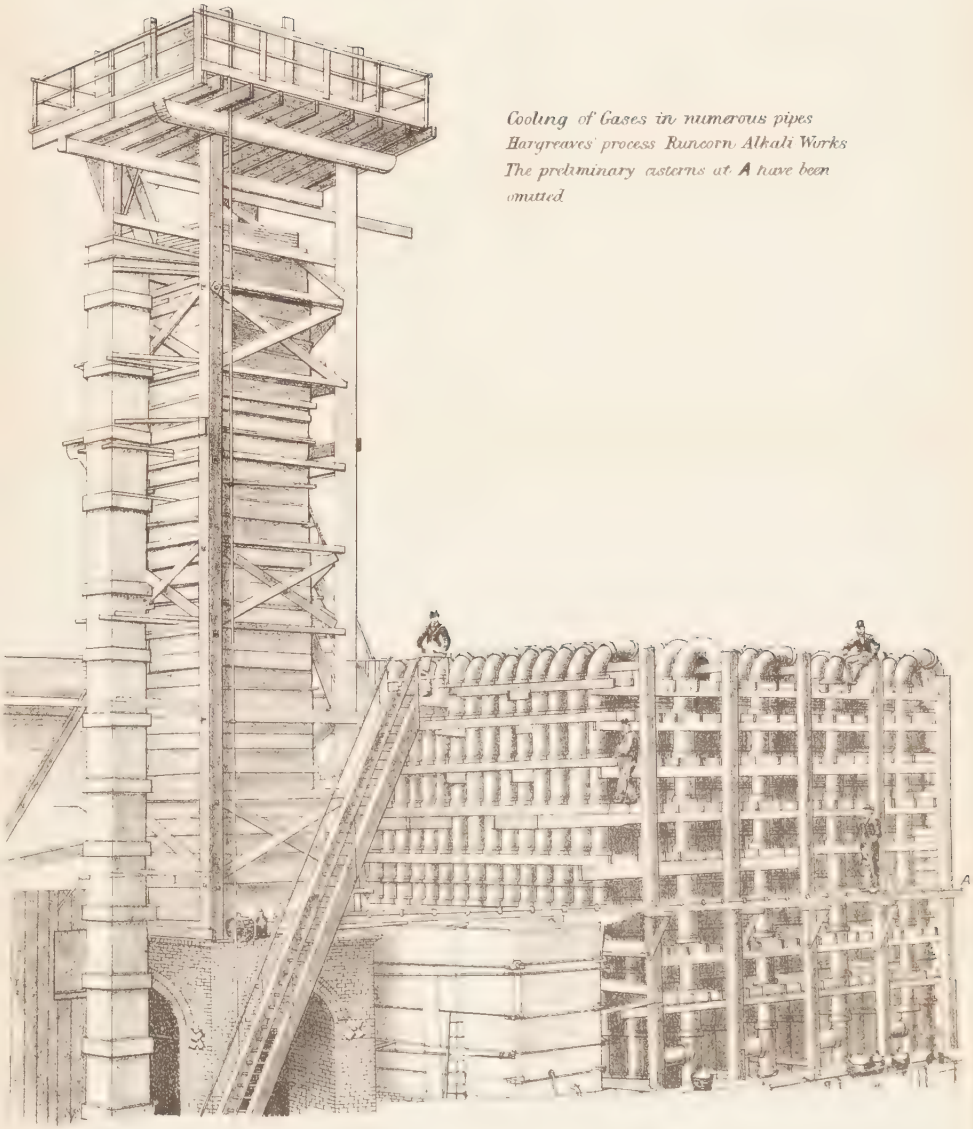


Hood at Bridgewater Alkali Works St. Helen's, 14 feet by 7 and 18 feet high, with flue leading to the chimney.

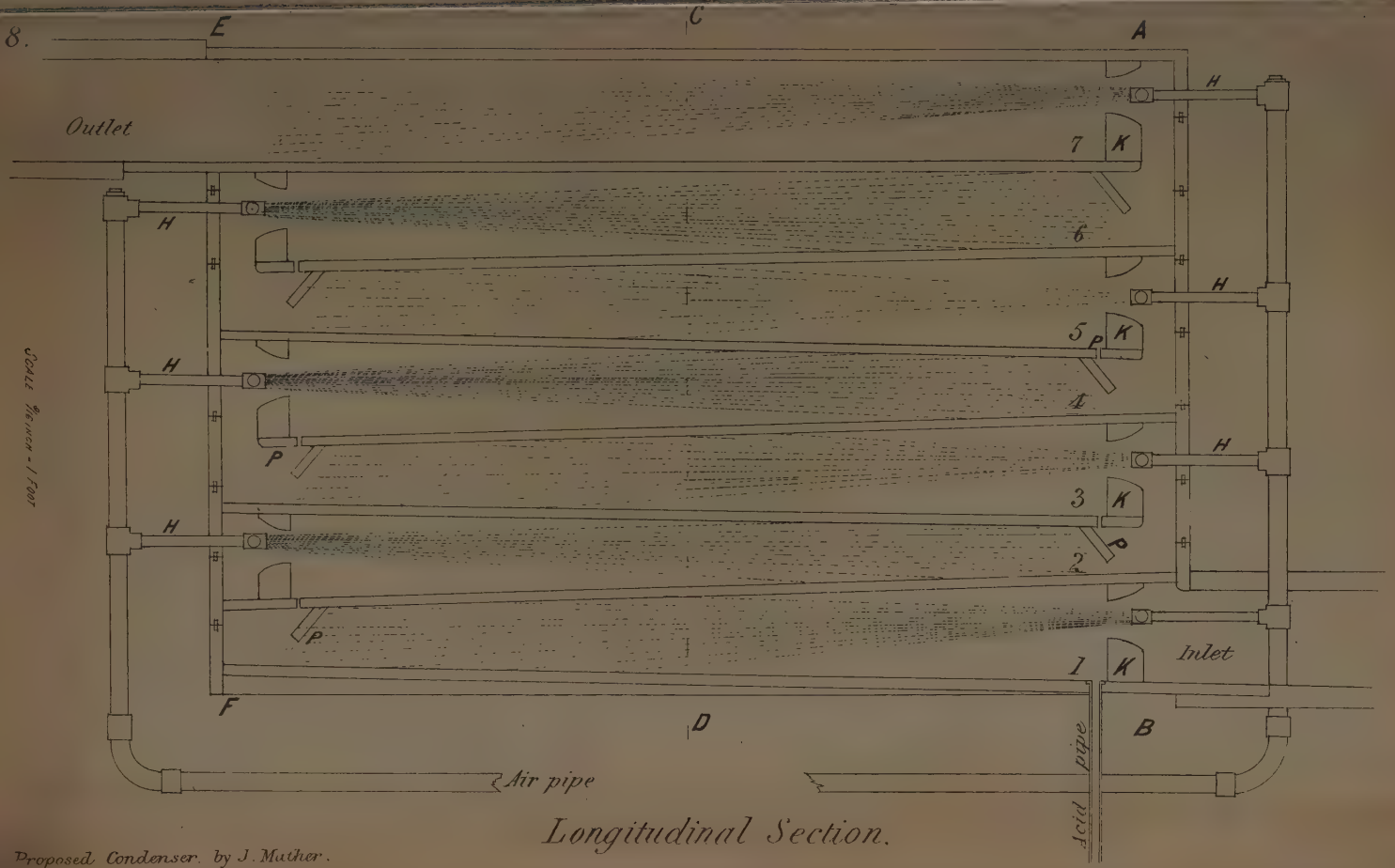
N.° 6.

Newall & Bowman. Only 1 bent connecting tube is shown. There are several The outlets at centre bend are left out.

Fig. A.

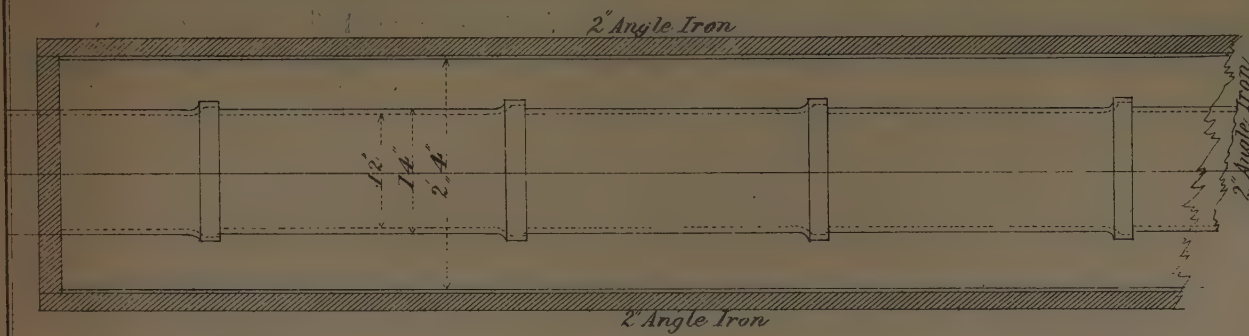


Cooling of Gases in numerous pipes
Hargreaves' process Runcorn Alkali Works
The preliminary asterns at **A** *have been*
omitted


N° 8.
E
C
A
Outlet
H
7
K
6
5
P
4
3
2
1
Inlet
F
D
B
Air pipe
Acid pipe
Scale ¼ inch = 1 foot
Longitudinal Section.
Proposed Condenser. by J. Mather.

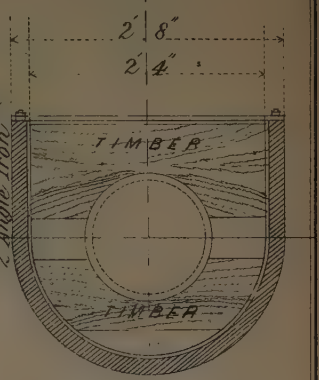
N°. 9.

Fig. D.



PLAN.

Fig. B.



END VIEW.

Water trough, Cooling pipes conveying acid gases.

Dangerfield, Lith. London.

Mr. Fletcher says also that the farmers round St. Helens have not complained of muriatic acid lately, but the chief complaints have been caused by sulphuretted hydrogen. I am not disposed to speak quite so favourably as he does as to acid, but on one point I fully agree, that "people have forgotten how bad it was before the passing of the Act of 1863."

This Report takes no notice of anything done under the Act of 1874. That Act has caused several fresh plans to grow up; some only have been alluded to. A plan for drawing all the gases from close roasters through a condensing system with lime to finish with, a fan being the agent at the extremity, and quite free from any of the gases, is one that I am desirous of seeing tried.

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For Her Majesty's Stationery Office.

ALKALI ACTS, 1863 and 1874.

ELEVENTH ANNUAL REPORT

BY

THE INSPECTOR

OF HIS

PROCEEDINGS DURING THE YEAR 1874.

(*Presented pursuant to Act 26 & 27 Vict. c.* 124.)

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FOR HER MAJESTY'S STATIONERY OFFICE.

1875.

REPORTS

OF THE

INSPECTORS OF FACTORIES

TO

Her Majesty's Principal Secretary of State for the Home Department,

FOR THE

HALF-YEAR ENDING 31ST OCTOBER 1874.

Presented to both Houses of Parliament by Command of Her Majesty.

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Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
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REPORTS

TO THE RIGHT HON. RICHARD ASSHETON CROSS, M.P.,

Her Majesty's Principal Secretary of State for the Home Department.

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JOINT REPORT OF THE INSPECTORS OF FACTORIES

for the Half-year ending 31*st October* 1874.

Factory Inspector's Office,
New Home Office Buildings, Whitehall,
London, S.W., 27*th Feb.* 1875.

SIR,

We beg to forward herewith our separate Reports, in which we have brought under your notice several matters which we deem of interest.

We are,

Sir,

Your obedient servants,

ALEX. REDGRAVE.

ROBT. BAKER.

To the Right Hon.
The Secretary of State
for the Home Department,
&c. &c. &c.

Joint Appendix No. 1.

General Abstract showing the total Number of Accidents reported to the Inspectors of Factories during the Six Months ended 31st October 1874, pursuant to the 7th section of the "Factory and Workshop Act, 1871," (*which came into operation 22d August* 1871,) and which provides, That the only accidents to be reported are the following; namely,

"(*a.*) Any accident which causes loss of life to any person employed in the factory; and

"(*b.*) Any accident which causes bodily injury to any person employed in the factory, and is produced by machinery or by explosion or escape of gas, or steam, or metal, and is of such a nature as to prevent the person injured by it from returning to his work in the factory within forty-eight hours after the occurrence of the accident."

Nature of Injury.	Adults.		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.
Causing death	112	9	28	9	5	2	145	20	165
Amputation of right hand or arm	15	1	10	3	2	–	27	4	31
Amputation of left hand or arm	14	2	7	2	1	–	22	4	26
Amputation of part of right hand	43	21	55	30	18	10	116	61	177
Amputation of part of left hand	41	21	45	23	11	7	97	51	148
Amputation of any part of leg or foot	15	–	5	–	1	–	21	–	21
Fracture of limbs or bones of trunk	64	7	39	6	10	3	113	16	129
Fracture of hand or foot	64	13	35	10	10	4	109	27	136
Injuries to head and face	86	16	39	15	11	4	136	35	171
Lacerations, contusions, and other injuries not enumerated above	970	286	753	320	210	84	1933	690	2623
Total number reported	1424	376	1016	418	279	114	2719	908	3627

Joint Appendix No. 2.

MARY of the Total Number of Informations and Convictions, or other results, with the Amount of Penalties inflicted and Costs, in the Districts of the Two Inspectors, during the Six Months ended the 31st of October 1874.

Description of Offence.	Number of Informations.	Result.				Penalties imposed.																								
		Convictions.	Withdrawn or compromised with payment of Costs.	Adjourned.	Absconded.	Dismissed.	Imprisoned.	5d.	6d.	1s.	1s. 6d.	2s.	2s. 6d.	4s.	4s. 6d.	5s.	5s. 6d.	8s.	8s. 6d.	8s. 9d.	10s.	10s. 6d.	11s.	12s.	20s.	21s.	30s.	40s.	60s.	63s.	80s.	100s.
ying children and ng persons to work ween the fixed and versing parts of a self-ing machine whilst in tion - - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–
oying children under nt years of age - -	8	6	1	1	–	–	–	–	1	1	–	–	1	–	–	1	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–
oying children and ng persons without istering their names d date of first employ-nt - - - -	67	30	24	4	–	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	–	1	12	–	–	–	–
oying children and ng persons without gical certificates -	118	45	59	5	–	9	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	20	1	2	17	–	–	–	3
oying children before n and after one o'clock .. of the same day -	88	67	19	–	–	2	–	–	–	2	–	–	12	–	–	7	–	–	–	–	9	–	–	–	32	–	1	1	3	–	–	–
oying children with school vouchers -	202	135	53	6	–	8	–	–	4	9	–	–	7	–	1	22	2	–	1	–	16	–	–	–	64	–	–	7	1	1	–	–
oying children, young sons, and females at ht - - - -	62	44	15	–	–	3	–	–	–	3	–	–	1	–	–	21	–	–	–	–	2	–	–	–	8	–	–	7	1	–	1	–
oying children, young sons, and women after o'clock p.m. - -	49	30	19	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	22	–	–	6	–	–	–	1
oying children, young sons, and women after en o'clock p.m. -	9	3	5	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	1	–	–	–	–
oying young persons .. women after two ock on Saturday -	15	7	7	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	–	–	5	–	–	–	–	–	–	–
oying children, young sons, and women after r o'clock on Saturday	75	57	18	–	–	–	–	–	–	6	3	1	2	5	–	12	–	1	–	–	1	–	–	–	18	–	–	8	–	–	–	–
oying young persons .. women during meal urs - - - -	14	7	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	–	–	3	–	–	–	–
oying children, young sons, and women on unday - - -	2	2	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–
arried forward - -	710	434	227	16	–	33	–	–	5	23	3	1	24	5	1	65	2	1	1	–	32	–	–	–	194	1	4	62	5	1	1	4

Joint Appendix—*continued.*

Description of Offence.	Number of Informations.	Result.					Penalties imposed.																												
		Convictions.	Withdrawn or convicted with paymt. of Costs.	Adjourned.	Absconded.	Dismissed.	Imprisoned.	5d.	6d.	1s.	1s. 6d.	2s.	2s. 6d.	4s.	4s. 6d.	5s.	5s. 6d.	8s.	8s. 6d.	8s. 9d.	10s.	10s. 6d.	11s.	12s.	20s.	21s.	30s.	40s.	60s.	63s.	80s.				
Brought forward -	710	434	227	18	–	3	–	–	5	22	1	24	5	1	65	1	1	1	–	32	–	–	–	194	1	4	63	5	1	1				
Parents employing or conniving at the illegal employment of their children - - - -	104	54	39	8	1	2	–	–	1	8	–	1	5	–	–	27	–	–	–	–	7	–	2	–	3	–	–	–	–	–				
Parents allowing their children to be illegally employed during the night -	2	2	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–				
Parents neglecting to cause their children to attend school - - - -	169	105	56	3	2	3	–	1	7	30	–	–	7	–	–	44	–	–	–	–	13	–	–	–	2	–	–	1	–	–				
Employing females under 16 and boys under 10 years of age in brickworks - - - -	109	91	10	4	–	4	–	–	–	5	1	–	20	–	–	11	–	–	–	1	19	–	–	2	22	–	2	8	–	–				
Employing children and females illegally in glass factories - - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–				
Neglecting to give notice of accident to the certifying surgeon - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–				
Not keeping a register -	3	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–				
Not keeping factory in a cleanly state - -	1	—	—	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
Not lime washing as required by law - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
Not entering dates of holidays in register - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–				
Issuing and making use of false certificates of school attendance - -	1	—	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
Falsely pretending to be a Sub-Inspector of Factories - - -	1	1	—	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
Wilful obstruction of the Sub-Inspector in the execution of his office -	6	2	3	–	–	1	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–				
Total - -	1110	694	337	32	3	44	1	1	13	65	4	2	58	5	1	147	2	1	1	1	71	2	2	2	222	1	6	72	7	1	1				

The total amount of fines inflicted £514 2*s.* 2*d.* The total amount of costs, £508 14*s.* 0*d.*

REPORT of ALEXANDER REDGRAVE, Esq., Inspector of Factories, for the six months ended 31st October 1874.

Factory Inspectors' Office,
Whitehall, 28th January 1875.

SIR,

I HAVE the honour to submit to you my forty-fourth report upon the state and condition of factories and workshops.

The work of the department since the creation of the office of Inspector of Factories in 1833, has passed through phases differing much in the nature of the administration of the Act and of the duties required of us.

The first phase was that of a period of active opposition on the part of manufacturers to almost every part of the Factory Regulations.

This commenced in 1833 and lasted for some years. The duties of the Inspectors and Sub-Inspectors were very heavy, and their work was in every respect uphill. They had to prevent the employment of children under age, of young persons under age, of children without attending school, or of children, young persons, and women working during meal hours and longer than was legal, and to see that machinery was properly guarded. In all these points there was combined opposition from masters, overlookers, operatives, and parents, and the labour and anxiety under such circumstances may be conceived.

The factories were all of the same class, *i.e.*, engaged in the production of textile fabrics. The duties, as I have described them above, were without much variety, but harassing from the opposition that we met with.

But there were many who from the first gave a loyal adherence to the law, and cast their influence in the same direction. Others also in the course of time came to the conclusion that fatal consequences had not ensued from the transition from immoderate to moderate labour; and thus, after a few years, the Inspectors' duties of actual compulsion had only to be exercised over the few.

Then came another phase of inspectorial life—one which may be designated beneficial supervision. To all the main regulations no one objected. They were simple and well understood, and the whole country accepted the Factory Regulations.

This beneficial superintendence consisted chiefly in the exertions made towards the improvement of schools. Much time was occupied in visiting schools, in dispensing the factory fines amongst the schools, in examining the progress of the children, and in exerting all our influence to obtain for the factory half-timers the best instruction that was to be procured in their neighbourhood. But gradually our examination of schools became less and less necessary, as the action of the Committee of Privy Council on Education extended itself by means of Inspectors of Schools, and hence we had more time to spare when additional work was imposed upon us by the extension of the Factory Regulations, with general assent, to bleach-works, dyeworks, then to earthenware and other works, and subsequently to all the other larger establishments under the Factory Act, 1867.

The duties of the Inspectors became somewhat altered by these various Acts. The early Factory Acts laid down a sort of Draconian Code, from which there was no departure, and we had only to require implicit observance of well-known and rigid regulations. But by these new Acts a variety of modifications were authorised, depending upon investigation of the wants of various trades, the wishes of manufacturers, and the habits of operatives,—modifications which it was absolutely necessary to make available at the outset, but which, as I have reported on previous occasions, should be now very considerably diminished. Then in 1871 the supervision of workshops was added to our previous duties, and active inspection became necessary among the new class of works. The Factory and Workshop Act, 1871, repealing the special powers placed by the Workshop Regulation Act of 1867 upon local authorities, invested the Inspectors of Factories with the administration of that Act in addition to our other duties. We thus undertook the superintendence of every manual occupation in the country, not being subterranean or agricultural. So that we are now engaged in the apparently gigantic undertaking of watching over the interests of the working children, young persons, and women in every village in the United Kingdom. This has now prevailed for some four years. We have disseminated in every part of the country full information as to the new Acts; we have enforced by prosecution, where necessary, observance of the Factory and Workshop Regulations, and there is now a very general and upon the whole a satisfactory observance of them.

It is well here to glance at the means that have been from time to time provided for administering the various Acts,

as it will show very clearly what the feeling of the employers now is, compared with the early days of factory restrictions.

In 1834, when the first Factory Act was in operation, there were four Inspectors, with a staff of 14 Sub-Inspectors. There were about 4,500 factories, or 1,100 to each Inspector, and 380 to each Sub-Inspector. After ten years experience it was found that the number of Sub-Inspectors could be decreased, and two vacancies were not filled. The staff was however slightly increased on the passing of the Bleaching and Dyeing Works and Lace Factories Acts.

The following figures will show the nature of the work and of the state of my staff from my appointment as Inspector in 1852 to the present time.

Upon taking charge of the district in 1852, there were about 1,800 factories, all textile, under inspection. There were four Sub-Divisions, and each factory was visited about three times a year. This frequent inspection of every factory, a short experience showed me to be quite unnecessary, and as further work was added to us, I could provide for it, with a very small increase of staff.

After the passing of the Factory Act, 1864, each Sub-Inspector of my district had on an average 600 factories under his supervision. Four years afterwards, in 1868, by some re-arrangements I found they could very well take charge of about 800 or 900 works each, and after the lapse of another four years, in 1872, when we had to take charge of workshops, we were able, by a re-organization of the staff and by a better arrangement of their sub-divisions, to meet the additional work by a comparatively small increase of staff.

The re-organization of work and the redistribution of sub-divisions became necessary because much of the work would be found in places in which there were no factories, and in other places in which there were few factories and because the old rule of periodical inspection of factories was inapplicable and entirely unnecessary for vast numbers of workshops, and because the difference in the constitution of a factory and of a workshop made an entire change in the rationale of inspection, and consequently had an important influence upon the strength of the staff.

Having reduced the periodical inspection of the old factories, in which the observance of the law had become almost an institution, I then took into consideration the different kind of inspection required in a factory from that requisite for a workshop.

In a factory there are registers and medical certificates to be examined, all useful enough in their time. In workshops there is nothing of the kind.

Then again as to the difference between a factory and a workshop,—a factory is a factory whether the work be carried on by men only, or by children, young persons, or women; a workshop is a workshop only if work be carried on by children, young persons, or women.

Consequently, many of the 16,000 factories now in my district are places in which men only are employed, and which require but occasional inspection.

Again, in many of the workshops women only are employed; neither children nor young persons being ever found in them; the workrooms clean, ventilated, and not overcrowded. These again require but little inspection.

So that with an apparently enormous number of works upon the list, it is found by experience, when we come to the real and practical work, that it is less in proportion to the number of works to be inspected than it was 30 years ago.

I would refer to my report for October 1872, after having had charge of workshops since the beginning of that year. I appended a return (p. 12) of the work done by my staff.

The number of factories under inspection was then 16,361, and the number of inspections made of them 18,310.

The number of workshops (in some localities I have since found that the numbers given to me were in excess) was 63,431, and the number of inspections made of them was 17,201.

In the year comprised by the above return the staff was not fully manned, yet very considerable progress was made in the inspection of workshops.

I now append a return of the work of my Department for the year ended 31 March 1874, during a period when the staff has been fully manned.

Districts.	Names of Officers.	Number of Factories.		Number of Workshops.		—
		Under inspection.	Inspected.	Under inspection.	Inspected.	
Assistant Inspector	D. Walker - - Sub-Inspectors.	—	675	—	470	
North and east of Scotland.	R. W. Cullen -	840	1,292	524	423	
South and south-east of Scotland.	W. G. Saurin (when absent from ill-health assisted by Junior Sub-Inspector R. MacLeod).	425	267 89	4,500	236 70	
South-west of Scotland.	A. G. K. Woodgate - Resident junior W. E. Stokes.	1,673	1,617 1,053	5,000	478 988	From July 1873.
Northumberland, Durham, and North Riding of York.	Sir W. Chaytor -	970	992	4,000	486	
Rochdale, &c. -	E. H. Osborn -	706	1,345	250	288	
Leeds and East Riding of York.	G. H. L. Rickards - Resident junior W. T. Monsell.	1,555	1,369 1,116	4,275	619 955	
Assistant Inspector	Capt. Patrick - - Sub-Inspectors.	—	165	—	156	
Ashton Oldham, &c.	J. E. Sale - -	910	1,382	660	231	
Halifax, &c. - -	G. Hudson - -	788	1,438	500	173	
Huddersfield, &c. -	H. W. Kindersley -	784	1,493	500	265	
Bradford - -	W. A. Beaumont -	1,385	1,199	918	384	
Sheffield, &c. -	E. Gould, assisted by Junior Sub-Inspector R. MacLeod, during a vacancy. Resident Junior R. Bickersteth.	1,850	1,324 114 1,637	5,000	970 398 1,769	
Derby and Leicester	H. M. Thornhill, assisted by Junior Sub-Inspector R. MacLeod, when absent from illness.	572	490 292	5,000	657 504	
Nottingham and Lincolnshire.	T. S. Oswald -	1,078	1,295	5,000	753	
Northampton, Beds, and Herts.	J. W. Wood, assisted by Junior Sub-Inspector R. Macleod.	237	138 2	5,000	2,535 237	
Eastern Counties -	J. B. Lakeman -	559	472	4,154	637	
More immediately under the Inspector:—						
East London and parts of Essex and Herts.	R. E. S. Oram - Resident Junior Sub-Inspectors A. G. K. Woodgate, T. A. Potter.	1,658	501 408 1,166	6,307	4,511 840 110	To July 1873.
West London and parts of Berks, Bucks, and Herts.	J. Henderson - Resident Junior Sub-Inspector G. Clark.	975	857 —	2,750	781 408	
Kent, Surrey, and Sussex.	J. A. Redgrave - Resident Junior Sub-Inspectors R. MacLeod, G. Clarke.	1,150	527 14 163	4,000	1,687 734 790	From July 1873.
		18,115	25,181	56,338	24,743	

Total No. of Factories and Workshops - 74,453.
Visits of inspection - - - 49,924.

The work done during this period was naturally in advance of that shown by the previous return.

There were 18,115 factories, to which 25,181 visits of inspection were made.

There were 56,338 workshops, as nearly as may be the actual number in my district, and to these 24,743 visits of inspection were made.

So that in two years there was an increase of 7,000 visits to factories, and an increase of visits to workshops of a like amount, viz., 7,000.

In some of the sub-divisions every ascertained workshop has been visited. In most of the sub-divisions all the workshops in which children are employed, and in trades in which it has been the practice to work long hours, have been visited. In some sub-divisions every known workshop has been visited during the year. Upon the whole, excellent progress has been made, regular hours are nearly everywhere the rule, and an improvement, manifest and acknowledged, has taken place in the conditions of many employments.

My experience during the interval from 1872, showed that the Sub-Inspectorships might be more equalized as to amount of work, and I have recently amalgamated the Halifax and Huddersfield Sub-Inspectorships, giving a portion of the Halifax factories to the Rochdale Sub-Inspectorship, and I relieved the Nottingham, Northampton, and Eastern Counties Sub-Inspectorships by removing the Sub-Inspector from Halifax, and giving him a portion of each of those three Sub-Divisions.

The inspection of this vast variety of occupations has brought to our knowledge so much that is objectionable, and at the same time that might be so easily remedied, that in some parts of my district I have been able to set on foot what may be rather "ultra vires," but which is as important, perhaps, as the actual regulations of the law, viz., a return to the "beneficial supervision" to which I have already referred, but directed not exactly as heretofore, but in accordance with the prominent wants of the various occupations and premises under our charge. Having pressed upon all owners and occupiers of manufacturing premises the necessity of a thorough compliance with the actual regulations of the law, we have a little more time now to look around and notice the defects in arrangement, the want of ventilation, the overcrowding which have existed in many occupations. These are three points as to which it is difficult to lay down any precise directions. Each case must to a great extent be decided by the surrounding circumstances, and hence our proceedings herein must be guided by clear and abundant evidence of deficiencies.

Among the first subjects to which attention was paid, were overcrowding, want of ventilation, insufficient sanitary arrangements.

Overcrowding and want of ventilation were more patent in the workrooms of dressmakers and tailoresses, and in straw plait and lace schools.

Want of ventilation and unsatisfactory sanitary arrangements have been found to exist in letter-press printing offices.

Much of the continuance of these evils has arisen from defects not having been brought under the notice of employers by any one in authority. I am bound to say that our representations are seldom unattended to. We are of course careful to make only such recommendations as are reasonable and practicable, and we now hear on all sides of the increased comfort of dressmakers and tailoresses' workrooms. We have limited the number of workers in separate rooms in a vast number of establishments. Ventilation has been improved, and the improvement is constantly acknowledged by the employers. A few days ago only, Mr. Sub-Inspector Henderson, having advised additional ventilation in a workroom, received the following letter from the principal :—

"I have fixed the ventilators and think they are quite sure to answer. I am only sorry I have not had them before."

In another instance, complaint had been made of the arrangements of a dressmaker at Bayswater, and the complainant expressed her surprise at the attention paid to her complaint. She said,—

"Not expecting any reply to my letter, I neglected to call for one ; indeed when I wrote I did not suppose my letter would have received any attention. I cannot express my gratitude for your kindness in coming to Bayswater so quickly in answer to my appeal. Will you allow me to say that to help the helpless, and to care for those who care not for themselves, is indeed a noble vocation; if you receive but small thanks from those whom you serve, your reward will be the recompense of the just."

The business of very many printing offices, in the metropolis especially, is carried on in old dwelling houses, every room from the cellar to the attic being occupied. In these establishments the sanitary arrangements are generally bad and insufficient. The deficiencies were caused by the restricted space of the dwelling house, designed suitably enough for a family of 8 or 10 persons, but quite inadequate for a workshop of from 20 to 40 persons. A short time since I visited such a printing office. Every room was occupied, and the only water-closet for the men was in the front underground room, without any ventilation except into the room, in which

were the tank of water for washing the types, and rollers, &c., and a press at which three men were working.

Upon speaking to the principal, he regretted his want of space but undertook at once to remove the press at which the men worked, and to ventilate the closet.

In connection with printing offices, my attention has been drawn to the bad arrangements of what are called the "reading closets." These are the rooms or portioned off spaces in which the proofs are corrected, and as each reader is attended by a boy, and the reading is aloud, it is necessary that each reader should have a separate compartment for himself and his boy. The sun only pays fitful visits to the courts and alleys in the heart of London, and artificial light becomes indispensable for some hours daily, except perhaps in the height of summer; hence these reading closets are very close and confined.

In all these matters, however, enquiry is being made and suggestions offered, which will gradually introduce improvements greatly needed, but frequently very difficult of satisfactory accomplishment.

Mr. Sub-Inspector Rickards has just received the following letter from some cocoa and chocolate manufacturers, to whom he had recommended increased protection to the persons employed, and I quote it in illustration of the readiness of employers to listen to and adopt suggestions, in whatever direction they may be.

"We have pleasure in stating that we have altered the feed of our mill stores, so that by means of a lever a man can regulate them with perfect safety. We have also put a strong flat iron bar to prevent the men leaning so far over.

"In the engine house we have put up a bar as suggested by you. The cog-wheels of the sugar dressing machine we have fenced in with sheet iron. The drum of the large pan in the centre of the factory we have guarded with wood. The cog-wheels of the dressing machine upstairs we have railed round. We are also putting up guards in one or two other places, but those mentioned above are finished, and we think are effective."

Mr. Lakeman, Sub-Inspector for the Eastern Counties, referring to an occupation in which noxious gases are largely given out,—coprolite manure making,—reported, after a visit to one of these works, that he had made many inquiries, from which he was constrained to believe that a man's capability to work would be about five years. He at once discussed the matter with the manager and principals, and suggested alterations in remodelling every pit, for sealing the tanks to prevent the escape of sulphuric acid gas,

and for making air passages for the escape of fluoric acid gas. These alterations were carried out at an expense of 3000*l.*

At a subsequent visit to the works, Mr. Lakeman was assured by the men of the immense improvement in their condition, and they were loud in their praises of factory legislation which had been the means of giving them extra leases of life. The firm also wrote to him, expressing their pleasure in having laid out money so advantageously.

A few days since he again alluded to this subject, and says:—

"Since my special report of these places in 1871, I find great improvement in the mode of manufacturing, so that men's health is secured as far as appears possible, from inhaling noxious gases either in a pure or combined form. No. 2 is a model manufactory. The mixing chamber is made air-tight, as well as the compartments where the perfected material lies after issuing from the mixers. 'Tis here that carbonic acid gas is largely generated, but by condensation and air shafts it is rendered innocuous."

Now all these alterations were effected by the influence of the Sub-Inspector, by his reasoning with the managers and convincing them that they ought not to allow the continuance of evils which could be remedied.

Again, the weaving of horse hair seating prevailed in the village of Melford in Suffolk, and a great number of the youngest children were employed at the hand looms in "serving," that is, placing the fibre of hair at the side of the loom in its proper place. These children were employed for the same hours as the weavers (women), and of course never went to school. The Sub-Inspector, Mr. Lakeman, was met with the strongest opposition at first, but at length without a prosecution the whole system has been changed. His last report is as follows:—

"I am glad to report that weaving in houses is now done by adults, the serving is done by girls of 16, and as the horse hair weaving is the sole industry here, the rigid enforcement of the law has filled the schools, because the employment of half-timers would not pay the weavers. The village is completely changed."

At another village, Glemsford, a great change has been effected, quietly and successfully. Mr. Lakeman reports of his last visit thus:—

"Visited to explain the various Acts as to the education of half-timers, especially those in the silk mill. I find the children employed by parents at home work half-time, and regularly attend school.

"Five years ago there were no employed children attending school except those at work in the silk mill."

"The only school was inefficient, the master could scarcely read or write. Now upwards of 200 half-timers regularly attend a spacious and handsome school under the Glemsford School Board."

The occupation of straw plaiting, as carried on for years in Bedfordshire, Hertfordshire, and parts of Essex and Suffolk, has been open to very great and serious objections. As I have described in former reports, it is chiefly pursued by very young children, taught by a mistress in her own cottage, who crams into her one room as many children as possible, regardless of everything but the weekly pence to be obtained.

One satisfactory phase has been that the children were not generally overworked. But they were put to plait as soon as their fingers could hold the straw. They were overcrowded most shamefully, and learnt nothing else but to plait.

The effect of our supervision has been to close many of these straw plait schools. This has relieved poor little children from drudgery, while pent up in an unwholesome atmosphere, and enables them to carry on their occupation in the more free and genial atmosphere of their own cottages, but they are still liable to the same condition of attending school daily as bound them when working at the cottage of the straw plait mistress. Many straw plait and lace schools have been closed in Bedfordshire and Hertfordshire, but the most marked change has taken place in Essex and Suffolk. The following is the Sub-Inspector's description of two of the last schools closed in Essex :—

"One school held in a room containing 36 children, having 25 cubic feet of air to each.

"The other school held in a room with 10 children, each having a space of 34 cubic feet.

"The same person was mistress of both,—a poor miserable creature, with nothing but the schools to live upon. I have visited her four times, and tried all the powers of persuasion of which I was possessed to induce her to lessen the number of her scholars, but in vain. There is nothing left but to bring her case before the magistrates."

In 1872, when we took charge of the workshops, there were 24 straw plait schools in Essex, attended by 672 children, not one of whom was attending an elementary school, which gives an average of 28 children in each school; and as some schools had at least three times as many children as the dimensions of the room would justify, the average would be that there were in each school about twice as many children as there should be.

At the present time there are only 5 straw plait schools, with 45 children, or on the average 9 in each; and these children are attending school.

The earnings of the children who no longer work at plait schools have not been much interfered with. They carry on their occupation at home, sitting on fine days at the cottage door; and although they do not attend school as they ought to do, yet we cannot expect to make so great a change perfect in so short a time. Besides, we are met frequently with the difficulty of the want of school accommodation, to which I have referred at length in former reports, and which time only can overcome.

Another occupation which has given us much consideration, is that of the herring curing on the coasts of Norfolk and Suffolk.

This is a season trade; for a large part of the year little is done, for the remainder of the year the nights are frequently too short for the work crowded into them.

With a view to ascertain clearly whether there was an overwhelming necessity for the employment of women in the night-time, I requested the Sub-Inspector for those counties, Mr. Lakeman, to make special inquiry into the circumstances of these trades, and I now quote from his report:—

"Acting under the instructions that I should inspect the fish curing establishments of Yarmouth and Lowestoft, I have sought my opportunity when the arrivals have been heavy, so that the best chance of finding women employed during a period of pressure might be afforded me.

"An idea can be formed of the activity that must necessarily be aroused amongst the boat owners, fish salesmen, merchants, carriers, and persons employed in curing and packing, when I state that during last week twenty-four millions of herrings are computed to have been landed on Lowestoft Pier.

"Large curing houses have been built; they are open for about eleven weeks, from October to December, and during this time masters are anxious to make their harvest.

"In January, February, March, the North Sea fishery is open; these masters and their belongings are then in Scotland, or on the northern coast of Ireland. In April, May, June, they remove to Newcastle and Hull for the Yorkshire season. In July, August, and September, they are engaged in mackerel fishing; and in October, November, and December the herrings find their way further down to Yarmouth and Lowestoft.

"They employ the same persons all the year round, and pay them regular wages, whether working or not. Amongst them are Scotch, Irish, Newcastle, Hull, Yarmouth, and Lowestoft men and women.

"Thus the fish merchants in Yarmouth and Lowestoft and those who work for them are like the large sea bird called 'the Spratloader,'—wherever fish can be found, there they congregate.

"It is the first great object of fishermen to bring their fish into harbour as quickly as possible after the catch. If sold fresh they realize higher prices, and save the cost of salting; and in proportion to the time of arrival from the catching, whether delayed from stress of weather or from previous scarcity in the market, a rush is simultaneously made by all grades occupied in the trade, anxious to earn money and make an early sale.

"If fish arrive a day late after the haul, one can imagine the anxiety of merchants to cure them as quickly as possible.

"I now proceed to show the various processes, in order to ascertain where the Acts may be operative, confining myself to the herring trade of Yarmouth and Lowestoft.

"A. Arrival of herrings fresh, and what becomes of them.

"B. Arrival of herrings partly salted at sea, and why so salted.

"C. Arrivals that are well salted at sea.

"A. Upon arrival, the fresh herrings are sent away to all parts of the country.

"Those that are retained are converted into kippers, *i.e.*, the fresh herrings are split open, gutted, put into tanks of brine for 15 minutes, then hung up in the smoking room for a night. In the morning they are taken down, packed, and sent away by the early trains. The great desideratum is that these herrings to be converted into kippers be hanging in the smoking room one hour after the landing.

"B. Those fish that cannot be brought to shore on the day of catching, are partially salted to preserve them. The finest are converted into bloaters, *i.e.*, they are merely washed; they are not gutted nor salted on shore. They are hung up overnight in the smoking room, and the next morning they are taken from smoking room, packed and sent off by early trains as Yarmouth bloaters.

"C. Those fish that arrive well salted, having been detained at sea, are cured to preserve them. If the bloater market be brisk, the best are taken, rewashed for a day, hung up in the smoking room, and dealt with as bloaters. These fish are frequently heaped in masses of 100,000, and packed into barrels for exportation."

The following are Mr. Lakeman's records of visits to various herring curing establishments at Lowestoft:—

"A. Time of visit, 9.15 p.m. Women employed in gutting, riving, and hanging fresh herrings for kippering. Many of these came at 7 a.m., others at 9 a.m.; all would work until 11 p.m.

"B. Visited at 9.45 p.m. Women came to work at 2 p.m.; would leave at 10.30 p.m.

"C. Visited at 10 p.m. Women came to work at 3 p.m. Would work until the herrings were finished. Could not tell when that would be.

"D. Visited at 10.15 p.m. Would continue until 11 p.m.

"E. Visited at 8.45 p.m. Found three lads of 14. Began to work at 4 a.m. Women came at 4 a.m. Left at 8 a.m. Returned at 3 p.m. Would continue until work was done.

"F. Visited at 9.20 p.m. Women came to work at 9 a.m. Three came to work at 6 a.m.

"G. Visited at 10.5 p m. Two women began at 7 a.m., others at 9 a.m. All left at 10.30 p.m."

At Yarmouth precisely the same system is followed. Work is irregular, but as the great object is to send the bloaters and kippers by the first morning train, the greater part of the work is done in the evening and at night.

As an example to show how this mode of working has been rendered necessary, Mr. Lakeman refers to an instance a few days before his visit. He says:—

"On Thursday night last several cargoes of fresh fish arrived too late to be sent away; they must be either kippered or salted for export. The curers (women) were idle during the day. Now if these hundreds of thousands of fish had not been salted, or gutted and hung up in the smoking or drying rooms, they would be unfit for the market by the following morning, and could only be salted for export fish, as they would not keep fresh for a second day."

There are two modifications in the Factory and Workshops Acts to meet the case of such a trade as this.

The first is contained in the second schedule of the Factory and Workshop Act, 1870, which authorizes the employment of women in the preserving or curing of fish between 6 a.m. and 8 p.m., or between 7 a.m. and 9 p.m., or between 8 a.m. and 10 p.m., for not exceeding 96 days in the year, between 1st June and 24th December.

But representations were made, on behalf more especially of the herring fishery of the north-east of Scotland, that that modification did not meet the necessities of the case, inasmuch as large numbers of fish were dealt with on the quays on the arrival of the boats, at whatever hour, day or night, that might be, and that the fish must be dealt with immediately or it would be spoilt; and consequently it was enacted by the Factory and Workshop Act, 1871, that "nothing in the several Acts shall extend to the process "of gutting, salting, and packing fish immediately upon its "arrival in the fishing boats."

The difference in the application of these two modifications is this:—

In the case of fish being dealt with on the quays, being gutted, salted, and packed without removal to any special premises, the occupation is exempted from any restrictions.

In the case of converting herrings into kippers or bloaters, they are removed to curing houses, which are more or less remote from the shore or quays, where they undergo a process of smoking and drying, extending over a certain time, and being thus subject to a process within the definition of the Factory and Workshop Act, the premises are either factories or workshops.

The description given also by Mr. Lakeman shows that this process of smoking and drying is mainly done in the night, so that they may be sent off by the first train in the morning, and it thus assumes the aspects of a regular employment, and it is therefore with this class of occupation that we have to deal.

Mr. Lakeman subsequently had interviews with some of the principal fish curers at Yarmouth, and discussed with them the question whether the trade could not be brought into more regular arrangements, and whether it could not be carried on without the constant night work of women.

These gentlemen stated that their hours of work were generally between 8 a.m. and 8 p.m., or between 8 a.m. and 9 p.m., and occasionally later.

With respect to the export trade, that described in paragraph C. at p. 12, they were of opinion that the labour might be compressed within regular hours, and that the work might begin earlier, and consequently cease earlier.

The custom however of beginning late has continued so long that the workers take it as a matter of course, and there would be much opposition on the part of the women to begin early.

They did not think it possible to restrict the employment of the women within fixed hours, because their occupation depended entirely upon the arrival of the fish; that the arrival of the fish depended upon the elements, and that regard must be had to the amount of capital embarked, and to the effect also a reduction would have upon the smaller class of employers, who were the less able to bear any interference with their trade.

But it is to be remarked that at present the trade is followed in a rough wild sort of haste; it has called out no scientific appliances or ingenuity, and that the only thing sought has been the speedy unloading of the boats and dispatch of the fish by railway; and further, as one element of doubt whether a reasonable restriction would injure the trade, I learn that formerly it was the custom to land and sell fish on Sundays, but that now the boats make for port on Saturdays, and when this is not done the cargo is salted, and thus kept over the Sunday, and sold for export.

It is clear therefore that arrangements can be made without detriment to the trade to restrict irregular and injurious employment, and I do not foresee any insuperable difficulty in the work being as a rule limited for young persons and women between 8 a.m. and 8 p.m., with the option under the season trade modification, of working later when it shall be absolutely necessary, for a moderate number of nights during the season.

Mr. Lakeman has described his visits to these curing establishments at night as exhibiting the evils of late working in some of its worst forms. The women, robust and ruddy, are singing, laughing, full of slang, and rude jests bandied about between men and women,—in which he was generally included, being pressed to "stand" beer,—and which were probably excited by the nightly allowance of two pints of beer each. Sometimes the women lie down and sleep for two or three hours, in order to be up early and at work in the small hours. It is a state of things that no one seeing it as we do could wish to continue for a single moment longer than absolute necessity warrants.

The Act passed last session applicable to textile factories has settled in a satisfactory manner the question which had been agitated for some time in Yorkshire, Lancashire, and parts of Scotland, having for its object a reduction of the hours of labour of young persons and women.

After some agitation, a bill was proposed that the hours of work should be limited to nine hours and a half per day, leaving the distribution of those hours of work between 6 a.m. and 6 p.m.

A little consideration showed that this plan was not feasible, and it was dropped.

Then a subsequent bill proposed that the hours of work should be absolutely between 7 a.m. and 6 p.m., one hour and a half being set apart between these limits for meal times. And further, that no child should be employed under 10 years of age.

The grounds upon which this bill was advocated were that ten hours and a half were too long a period for women and young persons. That as the hours of work of men in the metal and other trades had been reduced to nine and nine and a half per day, it followed that women and young persons ought not to be kept at work for a longer period than their husbands and brothers. That they, and especially women and children, suffered much from having to rise so early in the cold wet winter mornings. And that the age

of 10 years was the earliest age at which children should be permitted to work in factories.

There did not appear however to be an overpowering weight of evidence that employment in a textile factory was in itself especially unhealthy. And with reference to the shorter normal days work in the iron and some other trades, it could not be overlooked that the practice of working overtime was the rule and not the exception.

The propositions which had been before us at the beginning of the year, were the following:—

Firstly. The then existing law. All work to be taken between 6 a.m. and 6 p.m., except in the winter months, when it might be taken between 7 a.m. and 7 p.m. This latter modification, as I have reported on former occasions, was adopted only in a few factories in the Midland Counties.

Secondly. The proposal to reduce the hours of work to nine and a half per day, to be taken between 6 a.m. and 6 p.m.

Thirdly. The proposal that work should be taken between 7 a.m. and 6 p.m.

The infrequency with which manufacturers availed themselves of the alternative of not commencing until 7 a.m. shows that it would not have been prudent to make such a mode of work compulsory throughout the whole year, and the principle adopted in the new Act of making it optional to work either between 6 a.m. and 6 p.m., or between 7 a.m. and 7 p.m. throughout the whole year, has fairly met the difficulty. The old hard and fast line of working between 6 a.m. and 6 p.m. only, had answered the purpose for which it was enacted, and the time had come when another arrangement was more suitable.

The time of commencing work is essentially an operatives question. It is to a great extent a matter of indifference to an employer whether work commences at 6 a.m. or 6.30 a.m. He looks rather to the punctuality with which work commences.

Employers mostly have looked to the title of the Act "Health of Women, &c." and have been inclined to adopt the later hour of commencement in the morning in deference to the opinion so strongly expressed that the earlier hour was injuriously affecting the health of women and children. They have had meetings to consider the question; they have urged the later hour of beginning work in the morning. The operatives have met, and generally passed resolutions in favour of beginning at the earliest

hour in the morning. In some cases a compromise has been made to commence at 6 a.m. in the summer months, and at 6.30 a.m. in the winter. In very many cases the hours of work in different mills in the same locality commence at different times.

Looking at this matter as between beginning at 6 a.m. or at 6.30 a.m., I can appreciate the views both of the employers and of the operatives.

The employers wish to embody in their arrangements the spirit and purpose of the new Act. The operatives seek to secure that which was the chief aim of the mass of them, viz., extra time in the evening.

The wish of the operatives to commence at six in the morning, or at latest at 6.30 a.m., is doubtless prompted by the desire of having all the leisure time in the latter part of the day. This is very natural. If the operatives commence at 6.30 a.m., the half-hour they gain in the morning is a loss; it is simply an extra time of bed; for they are no better off in the evening, as they do not leave off work any earlier than before; and again, I do not see that postponing the commencement of work until 6.30 or even to 7 in the winter would be of any great advantage to the women and children. It rains as much then, and is ordinarily as cold at that hour as it is at six, and it is certainly remarkable that although the bill allows of great latitude in the arrangement of the hours, I know of no instance in which the plan of commencing at 7 a.m. has been adopted at any of the factories, except a few in which the custom has always been followed in the winter.

The feeling of the operatives was shown very clearly at a meeting at Bradford, when the chairman of the Chamber of Commerce, a member of the firm of Sir John Salt, Sons, & Co., stated that his firm had taken the opinion of their hands whether they preferred to commence at 6 a.m. or 6.30 a.m., and the following was the result:—

"In the spinning department there were 1,262 in favour of six, 30 in favour of a quarter past, and 14 in favour of half past; in the weaving department there were 852 in favour of six, none in favour of a quarter past, and 10 in favour of half past; in the counting department there were 257 in favour of six, 4 in favour of a quarter past, and 2 in favour of half past."

Thus, Sir, I am led to the conclusion that in dealing with this question and leaving the selection of the time of commencing work to the discretion of those most interested, whether they should commence at 6 a.m. or

at what other hour it should be decided upon, you had appreciated the feelings and wishes of the operatives themselves.

It was too much to expect that an alteration in the arrangements for work could be effected without any difference or difficulty. But I am inclined to think that the difficulties have been less than might have been anticipated.

It is well to consider the causes of the difficulties which have arisen.

In Scotland, as I have shown in former reports, the actual hours of work had been generally reduced in the textile factories by an arrangement which was the keystone of the Act of 1874, viz., a re-arrangement of the meal hours. In some factories an hour was given for each meal hour, in some 50 minutes for breakfast, in others 45 minutes for breakfast, an hour for dinner, so that the weekly tale of hours' work had been already reduced within an hour or within half an hour of the tale which is practicable under the Act of 1874.

Here, therefore, the introduction of the new Act has caused but little or no difference in the mode of working.

In many parts of Yorkshire and in some parts of Lancashire the work ceased at 12 on Saturdays instead of 2 o'clock.

In some factories a longer breakfast time had been given, so that in these instances, and they are pretty numerous, the further reduction consequent upon the new Act has not been regarded as a bone of contention between employers and employed.

But we shall find the difficulties to have arisen in those localities in which it had been the practice to work the full number of hours allowed by the old Factory Acts, viz., 60 per week, and when the reduction of three and a half hours per week became necessary under the new Act. It is not unnatural that the questions of production on the one hand, and of wages on the other, should be the causes of some discussion and some difference of opinion before a settlement could be arrived at; but I believe that mutual understandings are being arrived at, and that at no distant period the question will be fairly and satisfactorily settled.

The elasticity which it was your object to give to the arrangements under the Act, has given occasion for considerable variation in the modes of working. Some persons have regretted this as tending to unsettle things, but I

consider it has some considerable advantages. The arrangement for the prolongation of the times allowed for rest and refreshment has enabled various plans to be adopted which were much desired by the operatives, but which were illegal under the Act of 1844. It was primarily for the immediate benefit of those who work in factories, but it is capable of being made subservient at the same time to the advantage of the employers. I will take the following instance,—the hours of work in a large cotton factory,—one of many others, were as follows:—

From 6 a.m. to 6 p.m., with one hour and a half for meals, on five days in the week ; 52½ hours work.

On Saturdays, from 6 a.m. to 12 at noon, with half an hour for breakfast; 5½ hours.

Total per week, 58 hours.

This arrangement had existed for some time, though at other factories the full 60 hours per week were worked, and there was a diminution of two hours per week compared with the competing factories.

Under the new Act the hours of work are—

From 6 a.m. to 5.30 p.m., with one hour and a half between these limits, on five days; 10 hours per day, or 50 hours.

Saturday, 6 a.m. to 12.30 p.m., with half an hour for breakfast; 6 hours.

Total per week, 56 hours.

The extreme time that can be worked by any factory now is 56½ hours per week, so that the difference is reduced in favour of this and other factories to half an hour instead of two hours. This gain of one hour and a half per week will be a fair compensation for firms which, with the view of giving their hands the full advantage of a Saturday half holiday, closed for several years at noon, instead of working until 2 p.m.

The new Act, therefore, does not spoil anyone of the good features of the old Act, but improves and confirms them, and this alteration of the law in requiring a rest after continuous work of four and a half hours instead of five hours, is not the least valuable of the alterations, and is acknowledged to be so by the great majority of manufacturers themselves.

I will give instances of the mode of working under the new Act in various parts of my district, and they bear testimony to the desire for the elasticity which the new Act allows, and which in a great measure the hard and fast line of the old Act prohibited.

The more usually adopted mode of work is as follows:—

	H.	M.
Work from 6 a.m. to 8 a.m.	2	0
„ 8.30 a.m. to 12 a.m.	3	30
„ 1 p.m. to 5.30 p.m.	4	30
	10	0

Times for rest and refreshment,—

	H.	M.
8 a.m to 8.30 a.m.	0	30
12 a.m. to 1 p.m.	1	0
5.30 p.m. to 6 p.m.	0	30
	2	0

In the above arrangement the additional half-hour enjoined to be given for rest and refreshment is given at the end of the day. By the following arrangement it is given in the morning, so that work commences half an hour later, and ends half an hour later than by the first plan.

	H.	M.
Work from 6.30 a.m. to 8 a.m.	1	30
„ 8.30 a.m. to 12.30 a.m.	4	0
„ 1.30 p.m. to 6 p.m.	4	30
	10	0

Times for rest and refreshment,—

	H.	M.
6 a.m. to 6.30 a.m.	0	30
8 a.m. to 8.30 a.m.	0	30
12.30 a.m. to 1.30 p.m.	1	0
	2	0

But in some parts of my district, and notably in Yorkshire, the hours were so arranged that the hands left work at 20 minutes to six o'clock in the evening; an arrangement so much prized that it has been kept sight of in the new plans, and whether beginning work at 6 a.m. or at 6.30 a.m., work has ceased as upon the old plan before 6 p.m. Thus in some instances,—

	H.	M.
Work from 6 a.m. to 8 a.m.	2	0
„ 8.30 a.m. to 12.30 a.m.	4	0
„ 1.15 p.m. to 5.15 p.m.	4	0
	10	0

Times for rest and refreshment,—

	H.	M.
8 a.m. to 8.30 a.m	0	30
12.30 a.m. to 1.15 p.m	0	45
5.15 p.m. to 6 p.m.	0	45
	2	0

In other factories, especially in winter,—

	H.	M.
Work from 6.30 a.m to 8 a.m.	1	30
„ 8.30 a.m. to 12.30 a.m.	4	0
„ 1 15 p.m. to 5.45 p.m.	4	30
	10	0

Times for rest and refreshment,—

	H.	M.
6 a.m. to 6.30 a.m.	0	30
8 a.m. to 8.30 a.m.	0	30
12.30 p.m. to 1.15 p.m.	0	45
5.45 p.m. to 6 p.m.	0	15
	2	0

In other instances,—

	H.	M.
Work from 6 a.m. to 8.30 a.m.	2	30
„ 9.15 a.m. to 1 p.m.	3	45
„ 2.15 p.m. to 6 p.m.	3	45
	10	0

Times for rest and refreshment,—

	H.	M.
8.30 a.m to 9.15 a.m.	0	45
1 p.m. to 2.15 p.m.	1	15
	2	0

Or again, the following plan is in operation, working from 7 a.m to 7 p.m.—

	H.	M.
Work from 7 a.m. to 8.30 a.m.	1	30
„ 9 a.m. to 1 p.m.	4	0
„ 2 p.m. to 6.30 p.m.	4	30
	10	0

Times for rest and refreshment,—

	H.	M.
8.30 a.m. to 9 a.m.	0	30
1 p.m. to 2 p.m	1	0
6.30 p.m. to 7 p.m.	0	30
	2	0

In some parts of Scotland, the whole of the time gained under the new Act has been added to the meal times.

Thus, work will commence at 6 a.m. Breakfast from 9 a.m. to 10 a.m. Work from 10 a.m. to 2 p.m. Dinner from 2 p.m. to 3 p.m. Work from 3 p.m. to 6 p.m.

Or in other districts the half-hour is utilized by giving 45 minutes for each meal-time, and by work ceasing at 5.30 p.m.

I cannot, however, think that the question of the health of women and children has, as yet, been sufficiently considered, either by the employers or by the operatives themselves. With respect to the latter, I can enter fully into the views of the men. They wish for more leisure at the end of their work. I have shown in former reports that in trades where only nine hours a-day are worked, they begin at 6 a.m. The men have been accustomed to rise early, it is no hardship to them.

But, looking at the case of women and children, I think some further mitigation of the difficulties they have to contend with in getting to their work by 6 a.m. ought to be managed.

When I have been in a manufacturing town, and have been roused from my sleep at 5.30 a.m., on a snowy or wet cold winter's morning, by the pattering of the clogs of the factory women and children going to work, I have doubted whether it would not have tended greatly to the comfort and health of many of them if they could have had their breakfast before they left their homes.

I have frequently pointed out that it was optional in winter to work between 7 a.m. and 7 p.m., and I have

explained the manner in which a few factories in the Midland Counties adopted these hours to the comfort of the hands, but I was always met with the statement that the hands preferred the early hour of closing at night to a late hour of beginning in the morning.

The following is the plan adopted heretofore in some of the silk and hosiery factories in the Midland Counties in the winter months:—

The hands had their breakfast before going to work.

Commence work at 8 a.m.

Dinner 1 to 2.

Leave off work at 7 p.m.

This was a sacrifice of half an hour's work per day, but in many instances the manufacturers considered they did not lose in production, because the workpeople came warm to work in the morning, and there was less time lost in consequence, and sometimes on the ground that there was only one break for a meal-time in the course of the day, instead of two, which is in some trades an important arrangement for the masters.

But although there was apparently only one meal-time, there were in reality two, for a period of from 15 to 20 minutes was given in the afternoon for tea. In a few instances the hands could go out of the factory, but in general the plan was for them to have their tea in the room in which they worked, and most frequently the machinery was in motion during the teatime.

I have had two or three complaints, because the above practice cannot be continued.

It is now illegal in textile factories for the following reasons:—

Under the Factory Act, 1844, a person could be employed for five hours before 1 o'clock p.m. without an interval for meals of at least 30 minutes.

Consequently, to work from 8 a.m. to 1 p.m.; 5 hours; and from 2 p.m. to 7 p.m.; 5 hours, was legal.

But by the new Act a person may not work for more than four hours and a half continuously at any portion of the day without an interval of 30 minutes.

It will, therefore, be necessary to have two distinct breaks in working between 8 a.m. and 7 p.m. instead of 1 as formerly.

As I have shown, it is tacitly acknowledged that it is too long to work from 2 p.m. to 7 p.m. without an interval for rest, by the giving a sort of informal tea-time between these limits, and I am satisfied, if the informal tea-time of 15 or 20 minutes were transformed into a real interval for rest

and refreshment of 30 minutes, the lessening of the strain of five hours in the morning and of five hours in the afternoon would be productive of increased comfort to the persons employed, and would not be disadvantageous to the employer.

We have thus mitigated in favour of the working children and women at home, the evils of long hours, of insufficient meal hours, and of neglected means of instruction.

Turning to the colonies, we find few signs of indigenous or even of imported manufacturing industries, and we have had no cause to ponder over the sufferings of our fellow workers in Canada, Australia, or the Cape.

But we see a cotton industry springing up in India, extending with rapid strides, and it behoves us here to enquire whether that industry is carried on upon the old lines of the cotton manufacture here, and if it is so carried on, as is the common report, by factories making 14 hours a-day, it is well that the legislature should step in while the industry is, so to speak, in its infancy, and by wise and moderate regulations stop the growth of habits of long hours, and of the employment of child labour.

From the "Statement of the moral and material progress of India,"* it appears that the first steam cotton factory was established at Kurla in 1863, and that there are now in the Bombay Presidency 18 cotton spinning and weaving factories, which employ 405,000 spindles, 4,500 power looms, and 10,000 hands, turning out daily 100,000 lbs. of yarn. There are also two cotton factories in the Bengal Presidency.

It is clear, therefore, that this is a progressive industry, and, looking to what factory legislation has achieved in this country, may we not hope that the native workers of India may be spared the ordeal which our cotton operatives went through in former days, and that they may be permitted to enjoy the blessings of moderate labour, of ample time for rest and meals, and of protection to children of tender years.

I have, &c.,

ALEXR. REDGRAVE.

The Right Honourable the
Secretary of State
for the Home Department.

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* Ho. of Comm. Papers, 1874, No. 196.

Appendix No. 1.

Report of Daniel Walker, Esq., Assistant Inspector of Factories.

Sir, *Dundee, July* 1874.

I have the honour to send to you my report for the last half year.

In addition to the usual work of the department, the Sub-Inspectors have been a good deal occupied, personally and by correspondence, in explaining the provisions of the new Act, both before and since it came into operation. Many of those provisions were imperfectly understood by several mill owners and others interested, and every facility for their being thoroughly known has been afforded by the Sub-Inspectors, in the hope that the law may be fully comprehended and obeyed, thus avoiding the necessity of having recourse to prosecutions.

Engine Boilers.

From the increasing frequency of boiler explosions, I am again induced to draw your attention to the dangerous practice of allowing persons to be employed in buildings under which are placed engine boilers. One of the most recent accidents arising from this cause occurred at Todmorden, when several persons were killed and 30 injured, some of them very severely. In this case, the coroner's jury recommended "that there should be Government inspection "of all steam boilers." Although it is not stated in the report of the proceedings before the coroner, which I saw, I am informed that the boilers were placed immediately under a room in which many persons were employed, and if the explosion had occurred at any other than the dinner hour, the consequences must have proved still more disastrous. The Todmorden case, however, is not a solitary instance of the dangerous practice referred to. I have seen many factories with boilers underneath them which, in the event of explosion, would tumble down like a pack of cards. This is a state of matters which should not be allowed to exist. The remedy is simple,—

1st. That the present boilers should be removed, or not replaced by new ones in their present dangerous position; and

2nd. That in the erection of new factories or other public works, it should be made illegal to place boilers under

any part of the buildings in which persons are employed.

This last suggestion cannot be deemed a hardship; on the contrary, I believe it would be universally acceptable throughout the manufacturing districts.

The first might be objected to on the score of expense, and as interfering with the rights of property, but in a matter involving the safety of so many lives, these minor considerations ought, in a great measure, to be overlooked.

It should also be borne in mind that the management of engine boilers is not always placed in the hands of skilled mechanics, but too often intrusted to men little, if at all, above the class of ordinary labourers.

Private Adventure Schools in Dundee.

In September last Mr. Cullen directed my attention to the objectionable character of the private adventure schools in Dundee, especially to such of them as are almost exclusively attended by children employed in mills and factories. We accordingly, in the course of the following week, visited together three of these schools, and I give you the following particulars which I noted down at the time and submitted to Mr. Cullen, whose views coincided with my own:—

I. Number of pupils attending in two sets, forenoon and afternoon - - - - - 100
Dimensions of room,—
Length - - 37 feet.
Breadth - - 27 „
Height - - 9 „

The room is under the level of the street about 3 feet. It is very close and confined, totally unsuited for the purpose in a sanitary point of view, and evidently injurious to the health of the children. In this school there is only one teacher.

II. Number of pupils attending forenoon and afternoon - - - - - 300
In large room - - - - 120
Dimensions of room,—
Length - - 44½ feet.
Breadth - - 19½ „
Height - - 14 „
In middle room - - - - 30
Length - - 20·9 „
Breadth - - 16·6 „
Height - - 11·9 „

In small room - - - - 20
Length - - 15 feet.
Breadth - - 9·9 „
Height - - 10 „

In this instance there was also much crowding, great heat, and bad ventilation, rendering the atmosphere most offensive. The teachers consist of one principal and two assistants, all uncertificated.

III. Number of pupils in two sets - - 240
Length - - 24 feet
Breadth - - 16 „
Height - - 11·6 „

One female teacher, assisted by a few of the elder children.

Two of these schools are without playgrounds, nor are offices of any description whatever attached to them. All the teachers at once admitted that the accommodation was inadequate, and from what has been stated you will be able to form an idea of the miserable provision made for the education of this industrial class of children in Dundee. The question of defective education, however, is not the only one involved, as the injury done to the health of the children attending such schools must be serious, and in many instances, it is to be feared, permanent. I may add that Mr. Cullen and I were glad to make our stay in these schools as short as possible, owing to the close and sickening state of the atmosphere; and we were satisfied that any little advantage the children might derive, in an educational point of view, by attending such schools, was far more than counter-balanced by the injury done to their health.

With whom the blame rests, it is not my province to inquire, but the falling off of education in Scotland, to which I have frequently directed your attention, ought not to excite surprise when, in the third town in the Kingdom in point of population, the education of so large and deserving a class of the rising generation is so inadequately provided for.

Time was when it was said that a Scotchman never left home to begin his career in life without carrying with him a Bible, and ability to read it. Unfortunately, this has now become a tradition, and, from what I have stated, is likely to continue so.

Half-time System.

A good deal has been said and written of late in Scotland in disparagement of the half-time system, in ignorance, as it appears to me, of the great good which has been accomplished

by it in England, where it has been more generally introduced, and fairly carried out. I have before mentioned to you that, previous to the passing of the Factory Act in 1833, education had been very much neglected in the manufacturing districts in Lancashire and the West Riding of Yorkshire; but in no part of England or Scotland has education made such progress of late years as in these counties; and well informed persons have assured me that this great improvement is solely attributable to the adoption of the half-time system, and to the establishment of numerous excellent schools in consequence.

Being aware how much attention Mr. Osborn had paid to the half-time question in all its bearings, I asked him to favour me with his views upon the subject, believing that any remarks he would offer would be deserving of consideration, and I now subjoin a copy of Mr. Osborn's letter:—

"Dear Sir, Rochdale, January 1875.

"To anyone acquainted with the practical working and good results of the half-time system in England, the disfavour with which it appears to be regarded in Scotland will seem matter for surprise, and the arguments used in its disparagement fallacious.

"The area comprised in the sub-divisions of Blackburn and Rochdale, with which I have been associated, embraces, as you are aware, those towns and districts of Lancashire in which the number of half-timers is probably greater than in any other districts, and the system has been most thoroughly organised; this area, therefore, affords a fair field from which to glean material for an accurate judgment, especially as the bulk of the children attending the schools are half-day scholars, and how far these schools are successful may be readily seen by reference to the Table of Grants in the Reports of the Committee of Council on Education; indeed, Lancashire and Yorkshire in the excellence of their elementary schools may challenge the remainder of the country.

"It has been a favourite text with some to aver that the Labour Acts have not succeeded as educational measures, but experience of education and of half-timers would, I think, convince an unbiassed observer that these children, taking into consideration their training in the means of earning a livelihood, and early habits of industry, are more truly and intelligently educated, in the real sense, than whole-day scholars of the same age and position in life, though, in the eyes of the schoolmaster, the latter may be the safer grant-earners for his school, in consequence of certain 'accidentals' of half-time, which must not, however, be regarded, as they too often are, as inherent defects of the system.

"The chief complaint we receive from schoolmasters and managers, and which is sometimes repeated in the reports of the Inspectors of Schools, is of the change of children from one school

to another. Of course, the whole-day scholar is less liable to this, his or her parents being generally of the class not engaged in factory labour; but among the factory children this arises, either from the removal of the family from one quarter of the town to another, when the previous school becomes too far distant, or a child changes employment to a factory where the employer insists upon all attending one particular school; this is happily now somewhat out of fashion, but nevertheless still obtains in some places, and, curiously enough, generally among the stoutest defenders of denominational education, but, of course, an employer in these cases makes this condition a part of the labour-contract. In most instances, too, he will also pay the school pence, in addition to the weekly wage, and how far this is an inducement is worthy the attention of those who argue parents are too independent to forego the privilege of paying for the instruction of their children.

"It has also been objected that these children never came to school till they began to work, and were then 9, 10, 11, and sometimes 12 years of age. This was undoubtedly true, but no fault of the law, for unless they had begun to work they would not have found their way to school at all; in many instances the parents could not afford to send them. Children of this stamp will, however, become fewer as the Education Act spreads, and, indeed, are now mostly found among families which have migrated from Ireland, or from agricultural and non-schoolboard districts.

"The minor difficulty of the half-timers' untidiness can be, as I have frequently seen, successfully overcome by proper care on the part of the management and master of a school, with the aid of a lavatory.

"Since I have been in Lancashire I have visited many schools, examined some thousands of children, and inquired of many intelligent masters and others, whose opinions deserve to carry weight, and I have become strongly impressed with the capability of the half-time system. I use the word 'capability' designedly, because it is evident that our elementary schools, like our upper-class public schools, have not a sufficiently strong teaching staff in proportion to the numbers to be taught to secure the results they otherwise should, for it must be clear to anyone who has knowledge of a child's mind and capacity that real instruction for three hours a day is as much as it can possibly carry with any true advantage or power of assimilation.

"I have the honour to be
"Yours obediently,
"D. Walker, Esq. E. H. Osborn."

Factory Workers.

I have observed, with regret, the remarks so frequently made to the disadvantage of the factory workers in Scotland; but from what has come under my own observation in the course of the last 37 years, I think they will bear a

favourable comparison with others of the working class. And I would ask those who speak so disparagingly of factory workers if they were ever in a harvest field, or had an opportunity of listening to the conversation of any number of men and women employed as farm servants. If so, I think they would be inclined to admit that factory workers, if not better, are, at least, not worse than their neighbours.

I have, &c.,

Alex. Redgrave, Esq., DANIEL WALKER.
H.M. Inspector of Factories.

Appendix No. 2.

Return of Prosecutions for Offences against the Factories and Workshops Regulation Acts, &c., in the District of Alexander Redgrave, Esq., for the Six Months ended 31st October 1874.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence	Amount of Penalty.	Amount of Costs.	Remarks.
1874.			*In the Sub-Inspectorship of Mr. Rickards.*	£ s. d.	£ s. d.	
June 18	John Shaftoe, York	Lord Mayor and H. Steward, Esq., Guildhall, York.	Employing a child without school certificate for previous week.	0 1 0	0 8 6	
„	„ „	„ „	Employing a child of 8 years of age in his brickyard.	0 1 0	0 8 6	
„	„ „	„ „	Employing a girl under 16 years of age in his brickyard.	0 1 0	0 8 6	
„ 20	Michael Kerigan, Skipton, as parent.	J. R. Tennant and F. J. Lace, Esqs., Court House, Skipton.	Allowing his son to be employed more than 6½ hours.	0 10 0	0 11 0	
„	„ „	„ „	Neglecting to cause his son to attend school	0 10 0	0 6 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Rickards*—cont.	£ s. d.	£ s. d.	
Aug. 4	John Sauer, brick manufacturer, Bromfleet.	Lieut.-Col. Pease and David Wilson, T. Voase, Esqs., Town Hall, Hull.	Employing three children more than 6½ hours per day.			
"	" "	" "	Employing the same without attending school -	- -	2 3 6	Withdrawn on payment of costs.
"	" "	" "	Employing the same without school certificate -			
"	" "	" "	Employing a girl aged 9 and a boy aged 9 in his brickyard.			
"	Samuel Blackburn, brick manufacturer, Bromfleet.	" "	Employing a child without attending school -			
"	" "	" "	Employing a child without school certificate -	- -	0 16 6	Withdrawn on payment of costs.
"	" "	" "	Employing a boy aged 9 in his brickyard - -			
"	James Williamson, brick manufacturer, Bromfleet.	" "	Employing a child without attending school -			
"	" "	" "	Employing a child without school certificate -	- -	0 10 6	Withdrawn on payment of costs.
" 18	Edward Bell, brick manufacturer, Bromfleet.	T. Voase and D. Wilson, Esqs., Town Hall, Hull.	Employing a child more than 6½ hours - -	0 10 0	1 12 0	
"	" "	" "	Employing a child without school certificate -	0 0 6	0 4 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Rickards*—cont.	£ s. d.	£ s. d.	
Sept. 15	R. Petty, brick manufacturer, Hessle.	W. Voase and David Wilson, Esqs., Town Hall, Hull.	Employing four children more than 14 days without school certificate.	0 2 6 0 2 6 0 2 6	0 17 8 0 17 8 0 17 8	One case dismissed for want of proof of employment.
„	William Hearfield, brick manufacturer, Hessle.	„ „	Employing two females under 16 in his brickfield -	0 2 6 0 2 6	0 14 3 0 14 3	
„	Blakney, Wakes, and Nail, brick manufacturers, Hessle.	„ „	Employing two females under 16 in their brickfield	0 2 6 0 2 6	1 8 3 1 8 3	
			In the Sub-Inspectorship of Mr. Henderson.			
June 1	George Bray, brick moulder, Dawley.	Robert Crook Walford and Daniel Rutter, Esqs., Uxbridge Petty Sessions.	Employing his child morning and afternoon of the same day.	0 5 0	0 8 0	
„	„ „	„ „	Neglecting to send the same child to school -	0 5 0	0 8 0	
„	John Clark - -	„ „	Employing a girl under 16 years of age in brickmaking.	0 5 0	0 10 0	
May 8	Antoine Delbarre, milliner, &c., Elizabeth Street, Pimlico.	I. J. Arnold, Esq., Westminster Police Court.	Employing two females after 9 p.m. - -	- -	0 2 0	Cases dismissed, it being established that the females were working for themselves.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Henderson*—cont.	£ s. d.	£ s. d.	
May 14	Madame Elise, milliner, &c., 170, Regent Street.	A. A. Knox, Esq., Marlborough Street Police Court.	Employing five females after 4 o'clock on Saturday	- - -	0 10 0	The charge having been established, the magistrate considered that the justice of the case might be met by imposing costs only.
"	Madame Flavie Tompkins, milliner, &c., Bruton Street.	" "	Employing five females after 4 o'clock on Saturday	1 0 0	0 10 0	
			In the Sub-Inspectorship of Mr. Lakeman.			
Aug. 7	Joseph Willmott, veneer cutter, Bow Bridge, Stratford.	Lieut.-Col. Howard and R. B. Reynolds, Esq., Police Court, Stratford.	Having employed a young person on the 1st July last from 6 a.m. to 8 p.m.	2 0 0	0 4 0	
"	" "	" "	Having employed five other young persons on the same day and for the same time.	- - -	1 0 0	Withdrawn upon payment of costs.
" 4	Alfred Matthias Gardner, brick and tile maker, Coggeshall, Essex.	Sir Thos. S. Western, Bart., Major Saville, Herbert Leigh, Esq., and others, Sessions House, Witham.	Having employed James Seabrook, a child, after two of the clock on Saturday, 27th June, in the handicraft of brickmaking.	1 0 0	1 2 6	
"	" "	" "	Having employed the same child for more than 6½ hours on Monday the 29th June.	1 0 0	1 1 0	
"	" "	" "	Having employed the same child for more than 14 days without school certificates.	1 0 0	1 1 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Aug. 4	Alfred Matthias Gardner, brick and tile maker, Coggeshall, Essex.	Sir Thos. S. Western, Bart., Major Saville, Herbert Leigh, Esq., and others, Sessions House, Witham.	Having employed Alfred Wade, a child, after 2 of the clock on Saturday, 27th June, in the handicraft of brickmaking.	1 0 0	1 1 6	
,,	,, ,,	,, ,,	Having employed the same child for more than 6½ hours on Monday the 29th June.	1 0 0	1 1 0	
,,	,, ,,	,, ,,	Having employed the same child for more than 14 days without school certificates.	1 0 0	1 1 0	
,,	,, ,,	,, ,,	Having employed Samuel Pilgrim, a child, for more than 14 days without school certificates.	1 0 0	0 18 0	
,,	,, ,,	,, ,,	Having employed the same child after 2 o'clock on Saturday, 27th June.	- -	- -	Dismissed. It was proved that the father Pilgrim took his child home to Halstead on Saturday, 27th June, at 1 o'clock, and did not return on the following Monday till noon. In taking evidence I was deceived.
,,	,, ,,	,, ,,	Having employed the same child for more than 6½ hours on Monday, 29th June.	- -	- -	Dismissed.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Aug. 4	David Pilgrim, brickmaker, Halstead.	Sir Thos. S. Western, Bart., Major Saville, Herbert Leigh, Esq., and others, Sessions House, Witham.	That he, being the parent of the child Samuel Pilgrim, did wilfully fail to cause his child to attend school.	- -	0 15 0	Remitted by Bench.
"	" "	" "	That he, being the parent of Samuel Pilgrim, did permit him to be employed after 2 o'clock on Saturday, 27th June.	- -	- -	Withdrawn.
"	" "	" "	That he, being the parent of Samuel Pilgrim, did permit him to be employed for more than 6½ hours on Monday, 29th June.	- -	- -	Withdrawn.
" 12	Silas Parmenter, High Garrett, Essex.	J. W. Saville, Esq., and Major Saville, County Court House, Bocking, Essex.	Having employed a child in the handicraft of brickmaking for more than 6½ hours on the 10th July last.	0 10 0	0 11 0	
"	" "	" "	Having employed the same child for more than 14 days without school certificates.	0 10 0	0 14 0	
"	" "	" "	Having employed a second child for more than 6½ hours on the 10th July last.	0 10 0	0 11 0	
"	" "	" "	Having employed the same child for more than 14 days without school certificates.	0 10 0	0 14 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Aug. 12	James Wm. Gray, Bocking, operative in a silk mill.	J. W. Saville, Esq., and Major Saville, County Court House, Bocking, Essex.	For that he, being the parent of a child employed in a brickfield, did wilfully fail to cause his child to attend school.	0 2 6	0 8 0	
„ 26	Charles Fisk, brickmaker, Rushmere.	Chas. Walford, Rolla Rouse, and W. P. Phillips, Esqs., Town Hall, Woodbridge.	Having employed a child for more than 14 days, to wit, for four months, in the handicraft of brickmaking, without sending him to school.	- -	- -	Dismissed, Costs not yet known. Why this case was dismissed I know not. It was fully proved by each witness and by my own evidence, showing that I had visited the field three times in three months, and found the child there each time, and that I wrote the Defendant after second visit, desiring him to send the child to school.
„	Augustus William Codd, brickmaker, Rushmere.	„ „	That he, being the parent of the child above mentioned, did wilfully neglect to cause his child to attend school, and being foreman of the yard, his boy worked with him.	0 0 6	1 4 0	The parent is found guilty of having wilfully failed to conform with the Act, but the occupier is found not guilty of having employed the boy.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Oswald.*	£ s. d.	£ s. d.	
June 2	R. J. Dexter, cigar manufacturer, Mansfield Road, Nottingham.	James Oldknow and W. A. Patterson, Esqs., Guildhall, Nottingham.	Employing a child both before noon and after 1 o'clock in the afternoon of the same day.	1 0 0	0 10 0	
"	" "	" "	Employing a child without having obtained a certificate of school attendance for the foregone week.	1 0 0	0 10 0	
"	" "	" "	Employing two young persons without surgical certificates.	1 0 0	0 10 0	Penalty only inflicted in one case.
" 15	R. R. Godfrey, milliner, &c., Watergate, Grantham.	Laurence Ridge (mayor). J. F. Burbidge, J. W. Jeans, and S. Ridge, Esqs., Town Hall, Grantham.	Employing four females after 4 o'clock on Saturday afternoon.	0 6 6	1 13 6	
"	R. J. Roberts, milliner, Watergate, Grantham.	" "	Employing two females after 4 o'clock on Saturday afternoon.	0 7 6	0 9 0	
"	John Bothamley, dressmaker, Swingate, Grantham.	" "	Employing two females after 4 o'clock on Saturday afternoon.	0 7 6	0 9 0	
" 24	Robert Pinder, milliner, South Parade, Nottingham.	Thomas Ball and Richard Birkin, Esqs., Guildhall, Nottingham.	Employing a woman after 8 p.m. on Saturday the 23rd May.	0 8 0	0 12 0	The Defendant's solicitor argued that sewing a ribbon on a bonnet which had just been sold in the show room did not bring the case within the meaning of the Act, but the magistrates decided that it was "clearly an evasion."

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Oswald*—cont.	£ s. d.	£ s. d.	
Aug. 19	Henry Warhurst, brick manufacturer, Carlton Hill.	Henry Akroyd, Esq., and the Hon. Henry Strutt, County Hall, Nottingham.	Employing a child, Samuel Sharp, under the age of 10 years, in the manufacture of bricks.	- -	0 2 6	As these were the first cases of the kind in the district the magistrates inflicted no penalties, but intimated that heavy amounts would be imposed in future.
,,	,, ,,	,, ,,	Not producing a certificate of school attendance for Samuel Best, a child under 13 years of age.	- -	0 2 6	
,,	Thomas Sharp, Carlton Hill.	,, ,,	Allowing his child, under 10 years of age, to be employed in the manufacture of bricks.	- -	0 2 6	
,,	Samuel Best, Carlton -	,, ,,	Not causing his child to attend school - -	- -	0 2 6	
,, 27	William Beeley, brick manufacturer, Blackmires.	Colonel Salmond, Colonel Need, and W. S. Coke, Esq., Mansfield.	Employing a child under 10 years of age in a brickyard.	0 10 0	0 14 6	
,,	,, ,,	,, ,,	Employing a child under 10 years of age in a brickyard.	0 10 0	0 14 6	
,,	,, ,,	,, ,,	Employing a child under 8 years of age in a brickyard.	0 10 0	0 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Oswald*—cont.	£ s. d.	£ s. d.	
Aug. 27	Herbert Collins - -	Colonel Salmond, Colonel Need, and W. S. Coke, Esq., Mansfield.	Allowing his child, under 8 years of age, to be employed in the above brickyard.	- - -	- - -	Withdrawn at the suggestion of the clerk, he remitting all costs. The magistrates adjourned for a fortnight, refusing to hear any more cases; and as the men had been away from work all day, I thought it unnecessary to bring them up a second time.
"	George Collins - -	" "	Allowing his child, under 10 years of age, to be employed in the above brickyard.	- - -	- - -	
			In the Sub-Inspectorship of Mr. Gould.			
July 22	Ward and Payne - -	E. M. Welby, Esq., Stipendiary, Town Hall, Sheffield.	Employing young person without registering name.	1 10 0	0 17 6	Two similar cases withdrawn on payment of costs only.
"	" "	" "	Employing young person without surgical certificate.	1 10 0	0 17 6	
"	" "	"	Employing young person without surgical certificate.	- -	0 6 6	
"	" "	" ,	Employing young person without surgical certificate.	- -	0 6 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Gould*—cont.	£ s. d.	£ s. d.	
July 30 and Aug. 6	John Brown, saw mill proprietor.	Alderman Skelton and full Bench, Town Hall, Great Grimsby.	Employing child in workshop for more than 6½ hours on one day.	0 1 0	0 18 0	After adjournment.
"	" "	" "	Employing same child for more than 14 days without obtaining school certificate.	0 1 0	0 18 0	After adjournment.
"	" "	" "	Employing child in brickyard for more than 14 days without obtaining school certificate.	- -	0 16 8	This case was withdrawn before hearing, costs paid by prosecution.
Aug. 26	John Wortley, file manufacturer.	E. M. E. Welby, Esq., Stipendiary, Town Hall, Sheffield.	Employing a child in workshop more than 6½ hours on one day.	- -	0 5 6	On payment of costs by Defendant, child being now sent properly to school.
"	" "	" "	Employing same child more than 14 days without obtaining school certificate.	- -	0 5 6	On payment of costs by Defendant, child being now sent properly to school.
Oct. 1	John Martin, letter press printer.	The Mayor (Alderman Hallam) and Thos. Sorby, Esq., Town Hall, Sheffield.	Employing child without registration - -	1 0 0	0 10 0	
"	" "	" "	Employing same child without surgical certificate.	1 0 0	0 10 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Gould*—cont.	£ s. d.	£ s. d.	
Oct. 1	John Martin, letter press printer.	The Mayor (Alderman Hallam) and Thos. Sorby, Esq., Town Hall, Sheffield.	Employing same child without school certificate -	1 0 0	0 10 0	
"	" "	" "	Employing same child both before noon and after 1 o'clock on the same day.	1 0 0	0 10 0	
"	" "	" "	Employing a young person without registration of name.	- -	0 4 6	Withdrawn on payment of costs by Defendant.
"	" "	" "	Employing same young person without surgical certicate.	- -	0 4 6	Withdrawn on payment of costs by Defendant.
"	" "	" "	Employing a young person without registration of name.	- -	0 4 6	Withdrawn on payment of costs by Defendant.
"	" "	" "	Employing same young person without surgical certificate.	- -	0 4 6	Withdrawn on payment of costs by Defendant.
			In the Sub-Inspectorship of Mr. Thornhill.			
May 4	George Dingley, nail and shoe tip manufacturer.	William Kempson (Mayor) and George Foxton, Esq., Town Hall, Leicester.	Emloying a child without school certificate -	1 0 0	2 14 0	As this was the first time Mr. Dingley had been summoned 18 other informations were withdrawn upon payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Thornhill*—cont.	£ s. d.	£ s. d.	
June 12	J. Barrow, brickmaker, Spinney Hill, Leicester, (Workshop).	William Kempson (Mayor) and George Foxton, Esq., Town Hall, Leicester.	Employing a child under 10 years of age in a brickfield.	0 1 6	0 9 0	
"	" "	" "	Employing a boy under 13 years of age without school certificate.	0 4 6	0 6 0	
" 10	William Walmesley -	C. Shakespear and C. Ashton, Esqs., Loughboro'.	Employing a girl under 13 without school certificate.	0 10 0	0 13 6	First prosecution at Loughboro' under the Workshop Act.
July 2	William Bacon - -	J. Bailey and F. Longdon, Esqs., Derby.	Employing child, age 13, in factory, not having certificate as he had attended school during foregone week.	- -	0 5 6	Withdrawn on payment of costs.
"	" "	" "	Employing child under 13 without having surgical certificate.	- -	0 4 0	Withdrawn on payment of costs.
"	Charles Mozley - -	" "	Employing a child under 13 without having surgical certificate.	- -	0 5 6	Withdrawn on payment of costs.
"	" "	" "	Employing child under 13 without having surgical certificate.	- -	0 5 6	Withdrawn on payment of costs.
"	" "	" "	Employing child under 13 without having surgical certificate.	- -	0 5 6	Withdrawn on payment of costs.
"	" "	" "	Employing child under 13 years of age in factory not having certificate as he had attended school during foregone week.	1 0 0	0 8 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Thornhill*—cont.	£ s. d.	£ s. d.	
July 6	Richard Wileman and Samuel Simpkin.	The Rev. Henry Lacon Watson Clerk and William Brookes, Esq., Hinckley.	Employing boy (under 13) in a factory without a certificate from the certifying surgeon.	1 0 0	0 13 0	
" "	" "	" "	Employing boy (under 13) in a factory without a certificate from a schoolmaster.	1 0 0	0 10 0	
			In the Sub-Inspectorship of Mr. Saurin.			
May 6	Richardson, Noble, & Co., wool manufacturers, Hawick.	Wm. Scott Watson, David Pringle, and Robert Ewen, Esqs., Town Hall, Hawick.	1. Employing a child more than 6½ hours	1 0 0	- -	
"	" "	" "	2. Employing same child without a school certificate.	1 0 0	- -	At the request of the Bench I abandoned the fourth count.
"	" "	" "	3. Employing same child without being registered	2 0 0	- -	
"	" "	" "	4. Employing same child without a surgical certificate.	- -	1 6 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	Remarks.
1874.			*In the Sub-Inspectorship of Mr. Saurin*—cont.	£ s. d.	£ s. d.	
May 6	Wm. Laidlaw and Sons, wool manufacturers, Hawick.	Wm. Scott Watson, David Pringle, and Robert Ewen, Esqs., Town Hall, Hawick.	1. Employing a child at night - - -	- -	- -	The first count failed through a technical defect. In consideration of my waiving my claim to an adjournment, Mr. Laidlaw pleaded guilty to the other charges, and the Bench inflicted nearly the maximum penalty in the third case, deeming it an aggravated one.
"	" "	" "	2. Employing same child without being registered	2 0 0	- -	
"	" "	" "	3. Employing a young person until 9 p.m. -	4 0 0	- -	
"	" "	" "	4. Employing two young persons at night -	4 0 0	1 8 0	
			In the Sub-Inspectorship of Sir Wm. Chaytor.			
July 13	J. and E. Lumsden -	The Mayor and W. Thompson, Esq., Sunderland.	Employing four young persons unregistered -	2 0 0	3 6 0	Three cases withdrawn on payment of costs.
"	" "	" "	Employing four young persons unregistered -	2 0 0		
"	R. W. Pomfret - -	" "	Employing four females contrary to provisions of Factory and Workshops Act.	1 0 0	1 9 0	Three cases withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Sir Wm. Chaytor—cont.*	£ s. d.	£ s. d.	
Oct. 20	Wm. Elsdon - -	Jos. Green and John Byrom Brawell, Esqs., North Shields.	Employing a child before noon and after 1 o'clock in the afternoon of the same day.	1 0 0	0 10 6	
"	" "	" "	Employing a child without a school certificate -	1 0 0	0 6 6	
			In the Sub-Inspectorship of Mr. Sale.			
May 11	Samuel Whewell, manager, Brookfield Mill, Glossop.	Thos. Rhodes and J. Hadfield, Esqs., Glossop.	Employing a child before 12 and after 1 p.m. -	1 0 0	0 6 0	Whewell is the manager at Mr. Shepley's mill, Glossop, and part of his duty was the enforcement of the Factory Act. Mr. Shepley has always been anxious to carry out the Factory Act; the offence was committed in contravention of his orders.
June 17	Robert Bromley, parent -	Dr. Lees and J. Kershaw, Esq., Ashton-under-Lyne.	Not causing his child employed in a factory to attend school.	0 5 0	0 17 0	
Aug. 10	James Hurst, parent, factory operative.	The Mayor, Thos. Furnihough, and R. Bates, Esqs., Stalybridge.	Conniving at the illegal employment of his daughter, Kitty Hurst, she being a child under the age of 13 years.	0 5 0	0 11 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Osborn.*	£ s. d.	£ s. d.	
May 1	A. Duckworth and Sons, cotton spinners, Church Stile, Rochdale.	Richard Hurst and James Brierley, Esqs., Town Hall, Rochdale.	Employing females after 2 p.m. on a Saturday -	1 0 0	1 2 6	One case withdrawn on payment of costs.
"	Edward Wrigley, manufacturer, Mere Lane, Rochdale.	" "	Employing two females after 2 p.m. on a Saturday	1 0 0	1 2 6	One case withdrawn on payment of costs.
"	James and Wm. Wrigley, manufacturers, Fairfield Mill, Rochdale.	" "	Employing four females after 2 p.m. on a Saturday	1 0 0	2 0 6	Three cases withdrawn on payment of costs.
"	Rochdale Co-operative Spinners and Manufacturers Co. (Limited), Mitchell Hey.	" "	Allowing a young person to be employed in "oiling tops" during a meal hour.	1 0 0	0 13 6	
"	Tweedale and Mellor, cotton spinners, Rochdale.	" "	Employing a child without school certificate -	1 0 0	0 10 0	
"	" "	" "	Employing a child without registration - -	1 0 0	0 10 0	
"	" "	" "	Employing a child without certificate - -	1 0 0	0 10 0	
"	Brown and Seed, cotton spinners, Rochdale.	" "	Employing a child without school certificate -	1 0 0	0 10 0	
"	" "	" "	Employing a young person without registration -	2 0 0	0 10 0	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
May 1	Brown and Seed, cotton spinners, Rochdale.	Richard Hurst and James Brierley, Esqs., Town Hall, Rochdale.	Employing a young person without surgical certificate.	2 0 0	0 10 0	
"	R. and R. Walker, cotton spinners, Shawclough.	" "	Employing a child three months without attending school.	1 0 0	0 13 6	
"	" "	" "	Employing a child without school certificate -	1 0 0	0 13 6	
"	" "	" "	Employing a child without certificate - -	1 0 0	0 13 6	
"	R. and W. Hurst, cotton spinners, Rochdale.	James Brierley and John Robinson, Esqs., Town Hall, Rochdale.	Employing a child without attending school for a month.	1 0 0	0 10 0	
" 9	Ambrose Scholfield, Shawforth, cotton spinner.	G. T. Kemp and C. M. Royds, Esqs., Rochdale.	Employing a female after 6 p.m. - - - -	1 0 0	0 16 0	
" 13	J. Smith Windsor, cotton manufacturer, Flowers Mill, Bacup.	Captain Aitken and Dr. Whitaker, Bacup.	Employing females during a meal hour - -	3 0 0	3 14 0	Six cases withdrawn on payment of costs.
" 15	John Hardman, operative	Thomas Booth and Robt. Jewison, Esqs., Rochdale.	Allowing his daughter to be employed full time, she being under 13.	0 5 0	0 10 0	
"	" "	" "	Not causing the same to attend school - -	- -	0 5 6	Withdrawn on payment of costs.
"	Thomas Ramsbottom, operative.	" "	Allowing his daughter to be employed full time, she being under 12.	0 5 0	0 10 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
May 15	Thomas Ramsbottom, operative.	Thomas Booth and Robt. Jewison, Esqs., Rochdale.	Not causing his daughter to attend school -	- -	0 5 6	Withdrawn on payment of costs.
June 24	Thomas Convine, stone mason, Bacup.	H. Maden and T. Aitken, Esqs., Bacup.	Allowing his child, Mary Convine, to be employed all day, she being under 13 years of age.	1 0 0	0 12 6	Defendant not appearing to the summons, and having uttered forged certified copies of birth, the Bench inflicted the full penalty in each case.
"	" "	" "	Allowing his child, Ellen Convine, to be employed all day, she being under 13 years of age.	1 0 0	0 12 6	
" 25	Joseph Brown, cotton spinner, Oak Mill, Millgate.	R. Hurst and J. Brierley, Esqs., Rochdale.	Having employed Reuben Emmett, a child of 11 years of age, for the whole day.	3 0 0	1 18 6	Five summonses withdrawn on payment of costs.
" 4	William Nixon, Smallbridge.	R. J. Heape and C. M. Royds, Esqs., Rochdale.	Allowing his child under 12 years of age to work full time.	0 5 0	0 10 0	
"	" "	" "	Not causing the same to attend school - -	- -	0 6 0	Withdrawn on payment of costs.
"	John Mills, Smallbridge	" "	Allowing his child under 12 years of age to work full time.	0 5 0	0 12 0	
"	" "	"	Not causing the same to attend school - -	- -	0 7 6	Withdrawn on payment of costs.
"	James Royds, Smallbridge	" "	Allowing his child under 12 years of age to work full time.	0 5 0	0 12 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
June 4	James Royds - -	R. J. Heape and C. M. Royds, Esqs., Rochdale.	Not causing his child to attend school - -	- -	0 7 6	Withdrawn on payment of costs.
„	Abraham Howarth, Low Hill.	„ „	Not causing his child under 12 to attend school -	0 5 0	0 10 0	
„	„ „	„ „	Allowing the same to work full time - -	- -	0 7 6	Withdrawn on payment of costs.
„	„ „	„ „	Allowing his child under 8 to be employed -	- -	0 7 6	
„	Peter Flynn Green, Smallbridge.	„ „	Allowing his child under 12 to be employed full time.	0 5 0	0 10 0	
„	Laurence Lord, overlooker, Low Hill.	„ „	Allowing his child under 13 to work full time -	0 5 0	0 10 0	
„	„ „	„ „	Not causing the same to attend school - -	- -	0 5 6	Withdrawn on payment of costs.
„	Emmanuel Whitehead, Smallbridge.	„ „	Not causing his child under 12 to attend school -	0 5 0	0 10 0	
„	„ „	„ „	Allowing the same to work full time - -	- -	0 5 6	Withdrawn on payment of costs.
„	James Cheetham, Smallbridge.	„ „	Not causing his child under 13 to attend school -	0 5 0	0 12 0	
„	„ „	„ „	Allowing the same to work full time - -	- -	0 7 6	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrate who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Hudson.*	£ s. d.	£ s. d.	
Aug. 26	S. A. Bell and Sons -	Messrs. Massey, Lomas, Barnes, Roberts, Uttley, Dugdale, Scott, and Howorth, Burnley.	Employing a woman after 4 o'clock p.m. on Saturday, Aug. 1st 1874.	2 0 0	0 12 6	
"	" "	" "	- - - - - -	- -	2 0 0	Five other cases against the same offenders withdrawn on payment of costs.
"	" "	" "	Employing a female young person under 18 years of age after 4 o'clock p.m. on Saturday, Aug. 1st 1874.	2 0 0	0 12 6	
"	" "	" "	- - - - - -	- -	0 8 0	Another case withdrawn on payment of costs.
"	P. E. Roberts - -	" "	Employing a woman after 4 o'clock p.m. on Saturday, August 1st 1874.	2 0 0	0 12 6	
"	" "	"	- - - - - -	- -	0 16 0	Two other cases withdrawn on payment of costs.
			In the Sub-Inspectorship of Mr. Beaumont.			
May 15	Alfred Yates, Gomersal -	William Ackroyd and E. Day, Esqs., Dewsbury.	Employing a child, Ada Yates on March 19, before noon and after 1 o'clock of same day.	0 10 0	0 9 0	
June 22	James Aliffe -	Wm. Carr, Joshua Whitaker, and Thos. B. Firth, Esqs., Dewsbury.	Employing in a workshop at Soothill on the 29th April 1874, John Townend, a child, for more than 6½ hours.	0 10 0	0 11 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Beaumont*-cont.	£ s. d.	£ s. d.	
June 22	James Aliffe - -	Wm. Carr, Joshua Whitaker, and Thos. F. Firth, Esqs., Dewsbury.	Employing in a workshop at Southell on the 29th April 1874, John Hotwell, a child, for more than 6½ hours.	0 10 0	0 10 6	
"	" "	" "	Same as to James Day - - - -	0 10 0	0 10 6	
"	" "	" "	Employing John Townend without having obtained a school certificate.	1 0 0	0 6 0	
"	" "	" "	Same as to John Hotwell - - -	1 0 0	0 6 0	
"	" "	" "	Same as to James Day - - - -	1 0 0	0 6 0	
"	William Gartside - -	" "	Employing in a factory at Ossett on the 29th April 1874, one John Appleyard, a child, before noon and after 1 o'clock in the afternoon.	1 0 0	0 11 6	
"	" "	" "	Employing Joe Appleyard without having obtained a school certificate.	1 0 0	0 6 0	
"	Thos. Barker, milliner, &c., Dewsbury.	W. Blakeley and Jos. Day, Esqs., Dewsbury.	Employing three females after 9 p.m. in a workshop in Dewsbury.	0 15 0	1 12 6	
July 9	Job Thompson, milliner, &c., Dewsbury.	" "	Employing three females after 9 p.m. in a workshop in Dewsbury.	0 15 0	1 12 6	
" 10	Henry Goodall, carpet manufacturer, Daisy Hill, near Heckmondwike.	J. B. Greenwood and E. Day, Esqs., Dewsbury.	Employing a child without school certificate -	1 0 0	0 10 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Beaumont*—cont.	£ s. d.	£ s. d.	
July 30	S. Law and Sons, Cleckheaton, card manufacturers.	Col. Pollard and T. Horsfall, Esq., Bradford.	Employing two young persons, Jno. Gaukroger and John Woodcock, without having surgeon's certificates.	10 0 0	1 13 0	
"	" "	" "	Also employing the same young persons not having registered their names.	4 0 0	0 18 0	
"	B. F. Hardwick, Charles Street, Bradford, letterpress printer and bookbinder.	" "	Employing eight females at a quarter to one on the morning of May 30th, for the purpose of bookbinding.	8 0 0	3 1 0	Four of these cases were withdrawn on payment of costs at the wish of the Bench, as it was shown that these girls had two days holiday before the night on which they were working late and one day after that night, and that they were working at their own special request to make up for their holiday.
—	S. Bates and Son, Dewsbury.	J. Day and M. Ridgway, Esqs., Dewsbury.	Employing three children not having their names entered on the register, viz., Albert Haigh, Benjamin Harwood, and Ann Batley, and employing Albert Haigh without surgeon's certificate.	8 0 0	1 11 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Beaumont*—cont.	£ s. d.	£ s. d.	
Oct. 22	Glover and Cordingley -	H. W. Ripley, Esq., M.P., and Col. Pollard, Bradford.	Employing eight children without registering their names and without surgeon's certificate, and a child, Pat Doran, without school certificate.	2 0 0	3 3 0	Penalties inflicted in the first and last cases of 20*s.*, the others withdrawn on payment of costs.
„	„ -	„ „	- - - - - -	- -	2 16 0	The remaining seven cases being withdrawn were not pressed in consequence of Mr. Cordingley's explanation that he has entire charge of the works and at the time of my visit had been confined to his room for a month.
„	Geo. Hy. Oddy - -	„ „	Employing two children in a ropeworks more than 6½ hours in one day and without certificate of school attendance.	4 0 0	2 11 0	
„ 23	Hy. Goodall and Co., Orchard Mills, Heckmondwike.	W. Ackroyd and W. Blakeley, Esqs., Dewsbury.	Employing a child, Arthur Wilson, without surgeon's certificate and before noon and after 1 o'clock of September 7th.	3 0 0	0 16 6	
			In the Sub-Inspectorship of Mr. Kindersley.			
Sept. 22	John Paterson - -	James Barclay and William Russell, Esqs., County Buildings, Paisley.	Employing in his brickfield two females under the age of 16 years.	2 0 0	1 12 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Kindersley—cont.*	£ s. d.	£ s. d.	
Oct. 26	Ignatius McFadyen -	John Young and Anthony Inglis, Esqs., County Buildings, Glasgow.	1st. Allowing his son, 12 years of age, to be employed in Messrs. Watson, Gow, and Co's. iron foundry, for more than 6½ hours on one day.	0 5 0		Or ten days imprisonment. The Bench at my request inflicted the minimum penalty in each case, but the Defendant had only 10*s.* to meet the fines, so I paid the remaining 5*s.* myself.
,,	,, ,,	,, ,,	2nd. Allowing the same child to be employed at the said foundry both before noon and after one of the clock on the same day.	0 5 0	0 16 0	
,,	,, ,,	,, ,,	3rd. Allowing the same child to be employed at the said foundry without causing him to attend school as required by the Act.	0 5 0		
			In the Sub-Inspectorship of Mr. J. A. Redgrave.			
May 29	William Cremer, brickmaker, Milton - next-Sittingbourne.	E. Twopenny and Wm. Walter, Esqs., Sittingbourne Police Court.	Employing a girl under 16 years of age in the manufacture of bricks.	0 10 0	0 10 0	
,,	Agnes Jordan, brickmaker, Milton - next-Sittingbourne.	,, ,,	Employing a girl under 16 years of age in the manufacture of bricks.	0 10 0	0 10 0	
,,	,, ,,	,, ,,	Employing a girl under 16 years of age in the manufacture of bricks.	1 0 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave*—cont.	£ s. d.	£ s. d.	
May 29	Wood and Gregory, brick-makers, Lower Halston.	E. Twopenny and Wm. Walter, Esqs., Sitting-bourne Police Court.	Employing a girl under 16 years of age in the manufacture of bricks.	- -	0 5 6	Withdrawn on payment of costs.
„	„ „	„ „	Employing a girl under 16 years of age in the manufacture of bricks.	- -	0 5 6	
„	John Ballard - -	„ „	Allowing his daughter to be employed as above -	0 1 0	0 9 0	
„	Joseph Smith - -	„ „	Allowing his daughter to be employed as above -	0 1 0	0 9 0	
„	James Moore - -	„ „	Allowing his daughter to be employed as above -	0 1 0	0 9 0	
„	James Stokes - -	„ „	Allowing his daughter to be employed as above -	0 5 0	0 9 0	
„	„ „	„ „	Allowing his daughter to be employed as above -	- -	0 5 6	Withdrawn on payment of costs.
June 15	George Smeed, brick-maker, Murston, Sitting-bourne.	Rev. G. Moore and W. Walter, Esq., Sitting-bourne Police Court.	Employing a female under 16 years of age in the manufacture of bricks.	1 0 0	0 11 0	Notice of appeal given.
„	„ „	„ „	Employing a child under 13 years without a school certificate for previous week.	1 0 0	0 11 0	Notice of appeal given.
„	„ „	„ „	Employing a female under 16 years of age in the manufacture of bricks.	- -	- -	Adjourned.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
June 15	George Smeed, brick-maker, Murston, Sittingbourne.	Rev. G. Moore and W. Walter, Esq., Sittingbourne Police Court.	Employing a female under 16 years of age in the manufacture of bricks.	- -	- -	Adjourned.
"	" "	" "	Employing a child under 13 years without a certificate of school attendance for previous week.	- -	- -	Adjourned.
"	" "	" "	Employing a child under 13 years without a certificate of school attendance for previous week.	- -	- -	Adjourned.
"	Edward Keeler - -	" "	Not causing his child to attend school while employed in George Smeed's brickfields.	- -	- -	Judgment deferred.
"	Thomas Bartlett - -	" "	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
"	William Rowland -	" "	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
"	William Daniels - -	" "	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
"	George Brenchley -	" "	Not causing his child to attend school while employed in George Smeed's brickfields.	- -	- -	Judgment deferred.
"	Thomas Mirams - -	" "	Not causing his child to attend school while employed in George Smeed's brickfields.	- -	- -	Judgment deferred.
"	Daniel Woodhurst -	" "	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave*—cont.	£ s. d.	£ s. d.	
June 15	James Fletcher - -	Rev. G. Moore and W. Walter, Esq., Sittingbourne Police Court.	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
„	George Mills - -	„ „	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
„	John Gibson - -	„ „	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
„	Henry Bone - -	„ „	Allowing his daughter to be employed in the manufacture of bricks.	- -	- -	Judgment deferred.
July 6	Charles Burley, brickmaker, Sittingbourne.	Rev. G. Moore and E. Twopenny, Esq., Sittingbourne Police Court.	Employing a female under the age of 16 years in the manufacture of bricks.	1 0 0	0 9 0	
„	John Cherisson - -	„ „	Allowing his daughter to be employed as above -	0 0 6	0 9 0	
„ 20	George Smeed, brickmaker, Murston, Sittingbourne.	Edw. Twopenny and Wm. Walter, Esqs., Sittingbourne Police Court.	Employing a female under 16 years of age in the manufacture of bricks.	1 0 0	0 9 0	
„	„ „	„ „	Employing a female under 16 years of age in the manufacture of bricks.	1 0 0	0 9 0	
„	William Daniels - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 5 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
July 20	William Rowland -	Edw. Twopenny and Wm. Walter, Esqs., Sittingbourne Police Court.	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 5 0	0 9 0	
„	George Mills - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 5 0	0 9 0	
„	Daniel Woodhurst -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 5 0	0 9 0	
„	James Fletcher - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	- -	0 9 0	No penalty imposed at request of Sub-Inspector.
„	Thomas Bartlett - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	- -	0 9 0	
„	Henry Bone - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	- -	0 9 0	
„	John Gibson - -	„ „	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 5 0	0 9 0	
			Contraventions of the Workshop Regulation Acts, 1867 and 1871.			
„ 27	Charles and Benjamin Burley, brickmakers, Milton - next - Sittingbourne.	E. Twopenny and Dixon Dyke, Esqs., Sittingbourne Police Court.	Being the occupiers of a workshop in which a female under the age of 16 years was employed in the manufacture of bricks.	1 0 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
July 27	Samuel Young - -	E. Twopenny and Dixon Dyke, Esqs., Sittingbourne Police Court.	Allowing his daughter, under 16 years of age, to be employed in the manufacture of bricks.	0 11 0	0 9 0	
			In the Sub-Inspectorship of Mr. Wood.			
May 13	James Brazier, Wavenden	W. G. Duncan, R. Walpole, J. C. Maud, Esqs., Rev. G. Tarver, and C. M. Chester, Esq., Court House, Newport Pagnell.	Neglecting to cause his child to attend school -	0 0 6	0 15 6	These cases were adjourned from the last Petty Sessions.
,,	Edward Fan, Wavenden -	,, ,,	Neglecting to cause his child to attend school -	0 0 6	0 15 6	
,,	,, ,,	,, ,,	Allowing his child to be employed at a handicraft, she being under eight years of age.	- -	0 4 0	The Magistrate's clerk had entered on the summons a wrong date.
,,	George Birt, Wavenden -	,, ,,	Neglecting to cause his child to attend school -	0 0 6	0 15 6	
,,	George Smith, Wavenden	,, ,,	Neglecting to cause his child to attend school -	- -	0 7 6	Because on visiting the parents house, I had not seen the wife but explained the law to an elder daughter, therefore the parents were not held to have acted wilfully.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
May 12	John Bunyan, Pirton -	Canon G. R. Blomfield, C. C. Hale, T. A. Dashwood, S. R. Wilson, Esqs., Col. H. Wilkinson, and G. Oakley, Esq., Town Hall, Hitchin.	Neglecting to cause his child to attend school -	0 1 0	- -	
„	William Jarvis, Pirton -	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	
„	Jesse Crouch, Pirton -	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	No order was made as to costs in these cases.
„	Samuel Cheney, Pirton -	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	
„	Charles Shepherd, Pirton	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	
„	G. Handscombe, Pirton -	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	
June 2	George Goodship, Hitchin	Col. Wilkinson, Ch. C. Hale, G. Oakley, T. A. Dashwood, T. R. Wilson, and J. Layton, Esqs., Town Hall, Hitchin.	Employing a child without having obtained a school certificate for the foregone week.	0 0 6	0 12 6	
„	John French, Hitchin -	„ „	Neglecting to cause his child to attend school -	0 1 0	- -	No order made as to costs in this and two following cases.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
June 2	Wm. Sharp, Hitchin	Col. Wilkinson, Ch. C. Hale, G. Oakley, T. A. Dashwood, T. R. Wilson, and J. Layton, Esqs., Town Hall, Hitchin.	Neglecting to cause his child to attend school	0 1 0	—	
„	Wm. Stapleton, Hitchin	„ „	Neglecting to cause his child to attend school	0 1 0	—	
July 22	Meshack Varney, Hemel Hempstead.	F. J. Moore, Esq., Rev. A. C. Lacy, and A. H. Longman, Esq., Town Hall, Hemel Hempstead.	Employing a child without having obtained a school certificate for the foregone week.	0 0 6	0 7 0	
„	David Hitchcock, Hemel Hempstead.	„ „	Neglecting to cause his child to attend school	0 0 6	0 7 0	
„	Thos. Hobbs, Hemel Hempstead.	„ „	Neglecting to cause his child to attend school	- -	0 4 0	No penalty because of poverty.
„	Thos. Odell, Hemel Hempstead.	„ „	Neglecting to cause his child to attend school	- -	0 4 0	No penalty because of poverty.
„	Hy. Hawes, Hemel Hempstead.	„ „	Neglecting to cause his child to attend school	- -	0 2 0	No penalty because of poverty.
Aug. 19	James Collier, Aldbury	F. J. Moore, C. S. Hadden, Esqs., and Rev. Chas. Lacy, Town Hall, Berkhamstead.	Employing a child without having obtained school certificate for the preceding week.	0 0 6	0 6 0	
„	Thos. Munday, Aldbury	„ „	Employing a child under the age of 8 years	0 0 6	0 6 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Aug. 19	George Scott, Aldbury -	F. J. Moore, C. S. Hadden, Esqs., and Rev. Chas. Lacy, Town Hall, Berkhamstead.	Neglecting to cause his child to attend school	- - -	0 2 0	Only costs of the summons inflicted as they were the first cases from the district.
"	Alf. Rickard, Aldbury -	" "	Neglecting to cause his child to attend school -	- - -	0 2 0	
"	Ch. Delderfield, Aldbury -	" "	Neglecting to cause his child to attend school -	- - -	0 2 0	
			In the Sub-Inspectorship of Mr. Woodgate.			
—	Messrs. Lyall, McDonald, McMillan, confectioners, Glasgow.	Sheriff Substitute Wm. Guthrie.	Employing four young persons without previously registering their names and without obtaining the surgical certificate.	- - -	-	The case was adjourned to June 30 by Sheriff Guthrie, in order that he might consult with Sheriff Dickson as to whether a confectionery works came under the Bakehouse or Factory Act.
June 30	" "	Sheriff Substitute Wm. Guthrie, under the Factory and Workshop Act, 1871.	Employing four young persons without previously registering their names and without obtaining the surgical certificate.	- - -	-	Case dismissed. Sheriff Guthrie considered after consulting with Sheriff Dickson that the works came under the Bakehouse Act.
July 15	" "	Sheriff Dickson - -	Employing two young persons without previously registering their names and without obtaining the surgical certificate.	- - -	-	Sheriff Dickson decided that the judgment already given cannot be reviewed, and dismissed appeal. Neither party entitled to expenses.

Appendix No. 3.

In the six months ended 31st October 1874.

Table No. I.—*Fatal Accidents and Accidents arising from Machinery.*

Nature of Injury.	Adults		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.
Causing death	53	2	16	4	–	1	69	7	76
Amputation of right hand or arm	8	1	7	2	–	–	15	3	18
Amputation of left hand or arm	7	1	4	1	–	–	11	2	13
Amputation of part of right hand	18	12	27	13	13	5	58	30	88
Amputation of part of left hand	19	9	28	15	4	3	51	27	78
Amputation of any part of leg or foot	8	–	3	–	–	–	11	–	11
Fracture of limbs or bones of trunk	26	1	6	–	3	2	35	3	38
Fracture of hand or foot	34	1	16	1	5	–	55	2	57
Injuries to head and face	26	4	14	3	6	1	46	8	54
Lacerations, contusions, and other injuries not enumerated above	445	142	397	170	123	50	965	362	1327
Total	644	173	518	209	154	62	1316	444	1760

REPORT under the Laws relating to Factories and Workshops, by ROBERT BAKER, ESQ., for the half year ended October 31, 1874.

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Factory Inspectors' Office,
Whitehall, London,
December, 1874.

SIR,

I PREFACE this Report with offering you my sincere congratulations on the passing of the Factories Act, 1874 (Health of Women's), for though its provisions only apply at present to textile works, it is a great boon to both masters and workers to have the question respecting the hours of labour settled: and is, I trust, but the precursor of the same kind of effective legislation for many of the works at present under the Workshops Act, and otherwise.

It is most useful, from the simple manner in which it codifies the Factory Acts which have been passed since 1833, rendering their provisions plain and intelligible; whilst it remedies the defects and cross purposes that have arisen by other Factory Acts having been introduced piecemeal.

By shortening the hours of female labour, it opens up a method by which the mothers of families employed from home (if the fathers will only permit them to take advantage of it) may be enabled to return home earlier from their various avocations without diminishing to any great extent,

if to any at all, their industrial contributions to the family income; a vast benefit to their own social status, and prospectively, to that of the generation which is to succeed them.

Then, by a better arrangement of the employment of half-timers, namely, by changing their hours of work every week from morning to afternoon, not only are their wages equalized with their labour, but it enables the children to retain their places in the school classes, and thus to make educational progress with other scholars.

These, Sir, are the beginnings of benefits presently conferred; hereafter, I am sanguine enough to believe, to become blessings many times multiplied.

I think it right, however, to say, knowing as I do how all the Factory Acts have been received by the working classes and employers which I have had to carry out since and including that of 1833, that you have to look for various shades of opinion on the one now introduced to their history. This Act will be very differently received to all that have preceded it, if it does not excite thankfulness in some, disgust in others, and in most, an impatience of the new control which it enacts, though it be a control veritably in response to the increasing needs of sanitary and educational influences. Nor must we be surprised, if it is in advance of the common thought of the masses outside factory interests; and, indeed, of that of others, who have not the means of observing and testing the causes which operate on the social condition of the people.

It is trite to say that, mechanical industries enrich the producers far more quickly than education progresses amongst them: and yet this, is in truth, the great secret by which the balance of authority that renders these industries so successful, is retained. It is thus that, the control which moves so slowly after them is liable to be interpreted not as a congenial but as an obstructive power; and that the best and wisest intentions to render these industries healthy, and therefore more productive, are looked upon first with distrust and then with disobedience. In process of time, and perhaps a very short time, we shall probably see, estimates of the loss of capital to both masters and workers by the diminished hours of work from 60 to 56, whilst but little consideration will be given to what that loss would have been, had the diminished product been the result of 54 hours.

After watching the operation of the law for so many years, it looks to me as if it were only just now that, the necessity for giving to children working in factories education

along with employment, has taken its proper place in the history of factory legislation; and as if it had at last come to be relied on as the safety valve of the manufacturing interests of this country, as they enter more fully into competition with the manufacturing interests of the world.

Co-operation, too, as another safety valve, is fast cropping up in crowded localities; and upon that co-operation civilization must follow if it is well grounded, with far greater rapidity than in past times. By this co-operation I do not mean that which is understood of what are known familiarly as co-operative societies, but manufacturing companies formed by the working classes, either by themselves or in conjunction with their employers. Partners with energy, thought, design, and economy are being and will continue to be selected to carry on businesses that would utterly languish without these essential elements; and individuals formerly regarded as needful adjuncts to such societies are quietly but firmly being pushed aside for the entrance of that new blood which is everywhere being born into the energies amongst us.

And as this education advances it becomes apparently more and more inevitable, and it will be exhibited more openly as time goes on, that the United Kingdom will have in future to depend for its supremacy in manufacture, as also for other supremacies the origin of which is from within the public, and for effects everywhere becoming apparent, upon the conditions whereon it is conducted. Thus we see that, schools founded even in isolated districts are calling forth intelligences that can mix on equal terms with those of the most populous and thriving, even where the advantages to be derived have long been concrete; and other institutes are following to carry on the work which education has commenced.

Anybody of fifty years old can see that the working classes as a body are changed from what they were at that time of day, when there were no great public schools such as there are now, and scarcely any private ones, but only here and there a National or Lancasterian school, aided by the merest efforts on Sundays connected with places of public worship, and dependent for the most part on the goodwill and voluntary efforts of Christian sympathies.

Nor must we overlook the fact that, what with the facilities afforded by steamships and railways, travelling now forms part of this general education among the operatives. Those who were wont to see foreign countries as an exclusive privilege, and rode in diligences, with passport stoppages at every frontier, now unceremoniously glide

past the former stations of douaniers, gathering experience from personal and quick-witted observations, and bringing comparisons back with them which are invaluable to their futures; whilst others, again, are moving about on the surface of their own country, visiting in turn exhibition after exhibition, and spending the wealth they have acquired in "seeing the world" as the upper classes did in 1800, as the middle classes did in 1850, and as they themselves are doing in 1875. And thus we may ask one of another what is and what will be the condition of the unemerged, out of this vast army of working hands? What is and what will be shortly their relation to the more or less wealthy travellers they are succeeding?

"The working classes," says Zincke, "can now no more be kept down by the middle capital supported class, than the middle class itself could have been kept down by the upper land supported class, the territorial magnates. Formerly, sufficient for such purposes, under the old, rude, simple bygone order of things; now, it is but a broken reed to lean upon, and would only pierce the hand that would lean upon it. It is the masses, indeed, who now possess the strength of numbers, together with growing intelligence, and means for communicating and combining.

"You wish to look into the future? It is to some extent a clue to its unevolved possibilities, that, under the conditions now establishing themselves, force, in the old significance of the word, will not be the principle, the bond, the dependance, the cement of society.

"What then will be? Nothing can be suggested but knowledge, intelligence, justice. If these cannot exorcise the evil spirit that may torment modern society, there is nothing else to turn to.

"Should, then, an honest attempt be made to spread knowledge, to cultivate intelligence, and to be just to all, we are not without hope. In all changes that come in the natural order of things, what is needed is indicated, and more or less brought about by the very course of events.

"Happily for ourselves this course of events and legislation are working together in the desired direction. All cannot emerge, but all may be raised to a common level. This is what is now being brought about. The artizan reads the same newspapers, eats the same bread, travels by the same train, interchanges thought by the same post, and is endowed with the same amount of political power as the class that was formerly the most favoured; and now, education, which, because it is the most elevating is therefore the most equalizing of all agencies, is being provided for his children."*

* The Reverend Barham Zincke, who thus confirms an important passage in my report for April 1866; namely,—"as the power of wages "strengthens without the controlling influence of a well-directed education, "we may be certain of what the result will be if that education is any longer "neglected."

Let us hope, therefore, that henceforth all classes, whether at home or abroad, will well meditate on what they either see or hear, and be convinced that these foreshadowed inevitable days are fast approaching, and prepare so to accept them that, when they arrive, each may assume the duties of its new position and be satisfied.

Co-operative Factories.

With respect to the co-operation of which I have incidentally spoken, Mr. Sub-Inspector Cramp reports of the Bolton district:—

"The cotton trade during the last eight months, if not very profitable, has, at any rate, been very brisk. New mills are being built on all hands. There are six very large ones at present in Bolton, several in Darwen or elsewhere. Many old mills that have been standing for years have been re-opened, and everywhere work has been plentiful. The principle of co-operation in manufacturing enterprise seems to be spreading, as well as that of joint stock limited liability companies. In Darwen at present three newly formed co-operative spinning and manufacturing companies are building mills for 35,000 spindles each. Wages have been higher than ever they were, and instead of hands having to seek work they have been eagerly sought after.

"Of the employment of half-timers," he says, "the number of children working as .half-timers continues to increase. I am unable to give you the statistics for the whole of this district, but the following figures for Bolton are taken from the school board returns of the number in attendance:

In April 1871 it was 1,808.
In September 1873 it was 3,640.
In September 1874 it was 3,903.

"This increase may be accounted for in a variety of ways, as for example:—

"(1st.) Increase of mills and machinery. (2nd.) Full employment of workers. (3rd.) Enforcement of the Workshops, Mines Regulation, and Education Acts. This latter operates in this way: the school board enforces compulsory education, and will not allow half-time exemptions to any but children employed in factories, workshops, or mines. Parents, therefore, finding that they cannot keep children at home to mind the house, or shop, or babies, without letting them attend school morning and afternoon, at once send them to the mills for half-time work, half-time school, and half-time wages, instead of having their help at home.

"The staple trade of Bolton," Mr. Cramp adds, "being the spinning of fine cotton yarn, not nearly so many half-timers are employed as in Blackburn and the other parts of my district. The school attendance is on the whole very regular. I find," says he, "the school board of very great assistance. The clerk kindly sends me notice of any irregularities reported to him by

any of the officers; and the chief officer is most indefatigable in finding out the irregular attendance or non-attendance of half-timers; and also of any children under 13 who may be working full time. I have not received any help whatever from the Blackburn School Board, although I have made several advances in the way of asking for it.

"I think," he adds, "I detect amongst teachers of public elementary schools a tendency to kick away the ladder by which they climbed to their present high position. Compulsory education being the law in Bolton, Blackburn, &c., &c., if there were no half-timers, all children under 13 would be compelled to attend school as day scholars. Consequently, teachers are not, so dependent as formerly on half-timers. Looking at the matter from an educational point of view, the half-time system may be a stumbling block (I do not think it is); but financially, both to the country at large, and to the teachers in particular, it is a great success. It is true that the Education Department only reckons two half-timers as one scholar in the average attendance; but each of these half-timers pays a fee equal to that of a day scholar, so that in this way the teachers obtain double fees. I feel sure that a master would rather have 500 half-timers at 3*d.* each per week, only 250 of whom would be present at any one time, than 250 day scholars at the same fee each.

"Then, again, half-timers having made 150 attendances during the year are presentable at the examination for grants; and often, nay, I believe generally, attain as great success as the day scholars.*

"As a sample of the efficiency of half-time education I may mention that, at the board school in Bolton, which may be considered a half-time school, inasmuch as the number of scholars (excluding infants) is 470, 407, or 87 per cent., are half-timers.

"The report of the Inspector of Schools, received August 1874, was as follows:

"This large school is going on in a highly creditable manner. The order is good, and the children brisk and diligent. In the three elementary branches, the parsing was also very good, and the pieces committed to memory were both accurately recited, and their meaning understood.

"In reading, 97 passed out of 100.
"writing, 91 " "
"arithmetic, 83 " "

With respect to the school attendance a rather serious difficulty arises, which is, that under the Factory Acts three hours are required on—

* This is a remarkable confirmation of the fourth corollary in my report for the 31st of October 1861, p. 37, which has been heretofore disputed; namely, that "where half-timers have attended school before being sent to "work, they make equal progress with whole-day scholars; but where they "have not been so sent, under the most favourable circumstances, equality of "progress is only the result of a higher average age over the day scholars."

"Each working day of every week but Saturday, provided that, between the first day of November and the last day of February in each year, two hours and a half are sufficient. But in Accrington and Oswaldtwistle 2½ hours only are given in the afternoon all the year round, and also in many other places." "I have tried in vain to obtain," says Mr. Cramp, "the three hours requisite by the Factory Acts. The teachers consider themselves justified by the Education Act in keeping open only 2½ hours."

Mr. Cramp also reports another circumstance which is not peculiar, I fear, to the Bolton district, and which is of importance to half-time education.

"I regret," says he, "to report that, I have discovered several instances of false or erroneous school certificates. Some of the teachers finding it a tax upon their time and patience to copy correctly from the school register the attendance of the half-timers, have been in the habit of filling up the Factory School Certificate Book from memory, or from the statements of the children themselves. The result is that, absences have been rarely marked; and in one case it was proved to me that a child had been absent from school one day in each of six consecutive weeks, and yet in the school certificate book only one of these absences had been marked.

"In another case a boy had only attended ten times in four weeks, and the book was filled up to show his attendance every day during the same period.

"This is due simply to carelessness and hurry, and not to any intention to deceive. But it is very important to the factory occupier, who has no other test of attendance than the master's certificate. Unfair also to the children and their parents, and detrimental to the best interests of the teachers themselves."

The teachers complain, too, of the great, and as they deem it, unnecessary amount of labour required to fill these certificates up. They propose therefore that, the heading should be revised, and signed once for all at the beginning of the book; that the books should be ruled for a month instead of a week, to avoid repetition of names, and that instead of marking 9 to 12, or 1½ to 4½ daily, irregular attendances, or extra attendances only, should be marked. I brought the subject of the trouble of the present form of school certificate under the notice of Mr. Secretary Bruce in 1872, and suggested another which had been for some time in use at Leek, in Staffordshire, with great advantage. But my opinion was overruled, and the factory form, *i.e.*, the one occasioning all this trouble, directed to be used, as it has been ever since.

The teachers of Leek have now favoured me with a form of certificate which I here introduce, as it might possibly be used under the law of 1844, since it is not very unlike

that in the Factory Act, and from which, for legal reasons, it is difficult to depart. This form is intended to take the shape of a book of 13 leaves, giving four weeks in each leaf. Each child to have its book. It is intended that the child shall convey the book to its teacher on the Friday, and receive it from the teacher again on the Monday, and after taking it home to its parents for their examination, then to carry it to the employer to be kept in the room or place where the child works, during Tuesday, Wednesday, and Thursday, for the examination of the Inspector also, should he call to see it. If the child changes its place of work, the book to go with it. The book is to be supplied by the State, and when filled to be kept by the parent or guardian.

The following is the Leek Form:—

"SCHOOL CERTIFICATE.

"I hereby certify that the under-mentioned child employed in the (factory) or (workshop) of
situated in has or have attended the school kept by me at for the number of hours, and at the time on each day, specified in the columns opposite to his (her or their) name, (or names), during the week ending on Saturday the day of one thousand eight hundred and , and that the causes of absence are true to the best of my belief.

Name of Child.	Monday Time.		Tuesday Time.		Wednesday Time.		Thursday Time.		Friday Time.		Causes of Absence.
	From	To	From	To	From	To	From	To	From	To	

Signed Schoolmaster or Schoolmistress.

the day of 18 .

The above is, in fact, the form of school certificate copied from the schedule of the Factory Act, 1844, and would be therefore strictly in conformity with it; and in a great measure carries out the French livret, which in France every child is obliged to produce weekly to its employer, and to carry with it on any fresh application for employment.

The certificate book would also contain the penal clauses for school evasions, for the use of both parents and teachers.

The description of each day's attendance appears to me to be unavoidable. The Inspectors ought to be made aware of any failure of it, for the purpose of instituting an inquiry if not a prosecution against an occupier or a negligent parent; and the parent ought to be able, with the utmost ease, to procure and to preserve proofs of it.

The benefit that would accrue from this system of registering the attendance of school children, and the satisfaction which it would at least offer to parents in enabling them to ascertain from week to week what educational value they had had for their money, would be very considerable. For the outcry at all good schools where the teachers are striving their very utmost to effect the education they desire amongst their pupils, is, of the great want of regularity of attendance amongst them.

Thus a first-class schoolmaster writing to me recently observes:—

"When I speak of compulsory attendance I mean compulsory attendance, and not the utterly imperfect and miserably feeble substitute for it which we have at present. It is my firm belief that there is not a teacher in England who does not hold the present so-called school board compulsion in the greatest contempt. Compulsory attendance, as it is at present, exists only in name: it has no actual being.

"To illustrate my meaning. I have 450 boys in actual attendance on my books, and my average attendance is little above 250 or 260. Of course I have a great many half-timers, but not sufficient to make that great difference in average attendance. That is reduced by whole day scholars coming to school twice a week and upwards. So long as children attend school five or six times a week teachers never think of reporting them to the school board, knowing too well it would be of no use.

"In many cases, too, magistrates seem to think the Education Act a harsh one, and look upon school boards as little better than educational tyrants. It was thus with us until the school board cases were removed from the borough to the stipendiary courts."

This is also confirmed to me in a report made by Mr. Sub-Inspector Brewer, who describes a somewhat similar magisterial idea, judging by the public observation made by the gentleman who presided and the fines he inflicted:—

"I wish to draw your attention," says he, "to the difficulty I have had to contend with in enforcing the Workshops Act, arising, not so much from the inefficiency of the Act itself, as from the want of support I meet with in prosecuting offenders.

"Since I entered upon this district I have had occasion to prosecute 70 offenders, not having lost a case. But the total of fines amounts only to 5*l.* 19*s.* 6*d.*, or about 1*s.* 8*d.* a case. And this amount of fines would not have been as much as this had it not been for the better example of the Wolverhampton stipendiary Mr. Spooner, the Bromsgrove justices, and those at Halesowen.

"The fines to which I have referred are paltry and wholly inadequate to the offences. At Old Hill I can only obtain 6*d.* and 1*s.* fines, and these latter only on special occasions. The same remark applies also to Stourbridge; and Dudley is but a trifle better."

To the above I add a case reported in the "Birmingham Daily Post" which occurred this autumn at Rowley Regis, in Mr. Brewer's district:—

"At the police court yesterday, before Messrs. F. W. Barrs and Freer, Thomas Weaver, a collier, was summoned for unlawfully employing a female in his workshop after nine o'clock at night. Mr. Brewer said, 'he went to defendant's shop about 'half-past nine on the night in question, and found a woman 'named Catharine Gilbert at work.' Mr. Barrs said it was a most monstrous thing that a human being could not work after nine o'clock at night. It was a most extraordinary law. He should only inflict the slightest possible punishment on the defendant, who would be fined 6*d.*, and costs."

Now Mr. Brewer is not a Sub-Inspector to suggest to me a prosecution without a good reason for it; and of the sufficiency of his reasons I satisfy myself before any prosecution is undertaken. But for a prosecutor to be met by such an observation as that from the bench which I have quoted, in the presence of such an auditory as would assemble in a magistrate's court in the Black Country is, in so many words, to assert that the law may be broken with impunity notwithstanding all our efforts to carry it out with anything like even-handedness.

We have enough to do to meet the evasions of parents with respect to the wrongful employment of their children, without having also to defend our proceedings from magisterial prejudices. Take the two following cases also for other examples of this difficulty:—

Mr. Sub-Inspector Cramp reports a visit to the cotton mill of Messrs. M. and Sons, and finding a child of 10 years old employed in a spinning room. This child was discharged from the same mill three months prior to this visit on account of his irregular attendance at school, but got work at another mill, from which he was also discharged for neglect of school attendance. He got back to the first mill a few weeks previous to this second visit of the Sub-Inspector without the knowledge of the occupier; but

during the time he had been at work he had not attended school at all. The parents were directed to be prosecuted.

Again, Mr. Sub-Inspector King reports a visit to a letter-press printing establishment in Manchester, and finding two boys under 13 years of age employed, neither of whom had any certificate of school attendance for several weeks. One of these boys had also, according to his own account, been employed longer than the legal hours. This employer was directed to be prosecuted.

Once more. Mr. Sub-Inspector Hoare reports a visit to certain wire works in Manchester, and finding a child just 12 employed full time. This boy had been a few weeks previously sent away from a workshop because he was too young for full-time work.

The Educational Test of the Act of 1874.

The subject of the education of half-timers has, however evolved another question of still more consequence to both parents and employers. My attention has also been directed to the same subject by Mr. Assistant-Inspector Coles, "By section 12 of the Act of 1874 it is enacted "that, after the 1st day of January 1876 a person of the "age of 13 years shall be deemed to be a child and not a "young person, unless he or she has obtained a certificate "of having attained a certain standard of proficiency in "reading, writing, and arithmetic."

In Mr. Coles' words,—

"As this is the first time that proficiency in education has been made the test for employment in factories, and as some standard will shortly have to be fixed, the passing in which will be the condition, after the above-mentioned date, for full-time employment at 13 years of age in textile factories" (and, peradventure, in other works also), "it is a matter of some importance to ascertain what average standard half-time factory children of between 13 and 14 years of age (*i.e.*) those in the last year of their half-timeship, have hitherto attained at the periodical Government examination?

"Having this object in view," says he, "I have visited a number of schools in various parts of my district, and have obtained from the masters and mistresses of these schools, statistics on this subject which I hope may be of use to you, and which I enclose.

"The 25 schools from which I have derived this information are, I think, a fair sample of the factory schools in the textile districts generally; and the conclusion I have come to from looking over these statistics, and from the conversation I have had with the teachers is, that the standard should be made

progressive: that for the first two years after the test comes into force (*i.e.*) until January 1878 Standard III. might be fixed, after the expiration of that time Standard IV. should be made the qualification for full-time employment at 13."

I am wishful to express my obligation to Mr. Coles for his suggestion on this topic of the standard, since, for the time, I had overlooked it. But unless hundreds of factory children are to be thrown out of employment in the textile districts for want of educational proficiency on the first of next January, it will be needful that, this question should be at once brought under the notice of all persons concerned in it, mill occupiers, teachers, parents, and the Education department.

With respect to Mr. Coles' returns, on a careful examination of them I doubted whether they were so clear as to be safely relied on: for they offered no real testimony whatever, on the number of passes by the half-timers at their last examination by the school inspector. In fact, this is not disclosed to the teachers by him, and they were, therefore, comparatively useless for the object sought.

Rather I agree, in part at least, if not altogether with, the "humble opinion" of a shrewd writer on this topic, when he says that—

"Age alone should not be the test of a lad's fitness for beginning to work; but that, after a certain date, no child be allowed to begin work unless it can produce a certificate from a teacher that it has passed, or is able to pass, say, the third standard, which requires a fair knowledge of reading and writing, and the ability to work sums in the compound rules (money); or has absolutely reached the age of 12, the latter to meet the case of confirmed dunces."

The question of the proper standard, and of the period when it should be effectual is, therefore, one of considerable interest.

And even under the most favourable circumstances, supposing this test to be in progress of enforcement, so difficult will it be to carry out that, we may rely upon it in places where there are no school boards, it will be frequently demanded by both parents and employers,—"Supposing our "children can't pass that standard for the reason that there "have been no good and convenient schools to which they "might have gone to learn it, are they, therefore, to clam? "(starve), and who is to keep them whilst they are out "of employment?" It is to be feared, indeed, that many industries may be partially suspended, if not endangered for a while, for the want of half-timers, through a neglect which has so long been treated as simply venial.

The teachers great outcry at present is for "regularity," *i.e.*, regularity of attendance, and until this is obtained, or at any rate more of it than there is at present, "educational theorists," say they, "will have to continue their agitations, "and legislators their incessant changes in codes and regu-"lations."

Undoubtedly, much of this irregularity of attendance is to be attributed to the desire of parents to render their children wage-earners of the first class at the earliest possible moment, no matter how their education may have been hitherto neglected. For when parents are threatened by the school board authorities with legal proceedings in consequence of their children's non-attendance at school, they immediately, if they can, obtain some factory or workshop work for them, and put the officers of the school board at defiance.

In the textile districts the recent great increase of half-timers in schools is partly also attributable to the 13th section of the Factory Act, 1874, which enacts, that a child shall not be employed during 1875 if he is under the age of nine years, nor, after the expiration of that year, if he is under the age of 10 years. Provided that, any child who previously to the commencement of 1875 is lawfully employed in any such factory as a child under the age of nine years, and any child who previuosly to the commencement of 1876 is lawfully employed in any factory as a child under the age of 10 years, may continue to be employed in like manner as if this section had not been enacted. It is thus I hear on all sides that, children of eight years old are being largely employed now at the close of 1874, in order that they may, as time goes on, be enabled to avail themselves of this proviso.

This irregularity is also further attributable to the variable hours of school attendance under the Workshops Act.

And in order more fully to obtain the opinion of the teachers upon it, I issued a somewhat similar form to that of Mr. Coles to 37 teachers of public schools in Bolton-le-Moors, Haslingden, Darwen, Blackburn, Astbury, Droylsden, Macclesfield, Congleton, and Leek, seeking for information on the following points, namely, Whether each school was or was not provided with a mistress? How many half-timers there were in each school, boys and girls, on the average of weeks? How many out of the whole number were presented at the last examination to the school inspector? How many of these were between 12 and 13 years of age? And, lastly, what standard could

be recommended as best likely to coincide with the Act of 1874, and with the least disadvantage to the candidates?

The answers from 37 of these schools when collated gave the following results:—There were 27 female teachers: on the whole, 4,880 half-timers, of whom 853 had been presented for examination; of the total number, 18 male teachers recommended that the standard should be progressive, 16 that it should be immediate, and three were for not allowing boys to go to work at all till they had passed the second standard.

That these schools could be considered as offering fair examples for obtaining correct information from, may be judged by the fact that, upon the average, each contained 131 half-time pupils. The opinions of the teachers on the commencing standard to be adopted varied, however, as follows:—for the 2nd standard, 8; for the 3rd, 14; for the 4th, 5; for the 5th, 3; and without a definite opinion, 7. We are, unfortunately, therefore, as far off as ever arriving at a satisfactory test standard, as if no inquiry had been instituted.

It must be borne in mind, also, that the localities of these schools, as well as their size and character, offered a class of scholars far more likely to be efficient than in districts where the populations are sparser and the mills fewer, and, therefore, a higher test standard might readily suggest itself to the teachers in them. Nor must it be forgotten that there are many country districts wherein there are mills employing half-timers, amongst whom there are children of 13 years of age physically well able to add to the family income, and, indeed, whose earnings are necessary to it, but to whom it would be next to impossible to pass even the first standard all at once, independently of ordinary dunces whose parents have cared so little for their education that it has been hitherto altogether neglected. It seems to me, therefore, all things considered that, a progressive standard, commencing with the second, and rising gradually year by year to the fifth, would be most desirable, until parents are awakened by the danger of the loss of their children's labour, to a sense of their moral responsibilities; and have forsaken the insocial habits by which so many are now distinguished.

For as the following observations by three of the before-mentioned school teachers show:—

"1. Much difficulty arises from the fact that children employed in workshops are not compelled by law to attend school more than 10 hours a week, which may therefore be at any irregular period they may think fit. Were such children

prevented from being employed both before and after noon on the same day, much of this inconvenience would be obviated.

"2. Boys who work in cotton mills, moreover, are very migratory, and very few indeed make up the required number of attendances.

"3. In addition to the information required, allow me to draw your attention to the unsatisfactory clause in the 'Workshop Act,' in reference to the attendance of the children at school. It is not of unfrequent occurrence that the 10 hours attendance are made on two successive days, or otherwise very irregularly. This acts injuriously in two ways, 1st, the progress of such children is not nearly so satisfactory as that made by those who attend under the 'Factory Act,' by which they are obliged to attend five consecutive mornings or afternoons. 2nd. It occasionally happens that the boys are compelled to do a week's work in the remaining four days, thus injuring the health of the child. It would be much better, both physically and intellectually, if the attendance clause could be made the same as that of the Factory Act.

"I would also mention that it is strongly advisable some means should be contrived for retaining children at school until it has been ascertained that they are *fully* 13 years of age. It sometimes happens that they are allowed to work full time because they '*have the appearance*' of that age. Unscrupulous parents take advantage of this. I would suggest that a certificate of birth be procured and shown to the factory inspector, the employer, and the schoolmaster before engaged to work full time."

Lastly, Mr. Bignold reports in April last that, at a certain school board six children under 11 who had passed the fifth and sixth standard, were presented by the chairman with certificates exempting them from school attendance; armed with which, they intended to go to work full time at the factories. If, however, in any such cases it is not made clear by a foot note on the certificate of exemption, that the short-time regulation of the Factory and Workshops Act are still binding on both employers and parents, much trouble and irritation between them and the Sub-Inspectors will be produced.

In my report for the 31st October 1861 are the following observations, p. 33, which I quote, from another schoolmaster, whose opinions are very valuable: —

"The comparative progress in education between half-day and whole-day scholars is influenced by three different kinds of half-time scholars which we find in our schools:

"1. Those who have been in school before going to work as half-timers.

"2. Those who been to dame schools and have learned how to read and sew, but having no knowledge of writing or arithmetic.

"3. Those who, previous to becoming half-timers, had not attended school at all.

"Those in the first of these classes nearly keep pace with the whole-day scholars.

"Those of the second class, if intelligent children, will in two years obtain a knowledge of the simple rules, and be able to write easy dictations, falling into the 3rd class at an average age of 10 years, and with whole-day scholars at an average age of eight years and four months.

"Those of the 3rd class, having had no previous training, are longer in reaching even to the point mentioned last, and are the class of half-timers who leave school with a very scanty knowledge, which, from want of proper time to digest, is easily forgotten.

"There are three ways in which the attainments of factory children may be placed more on a level with the whole-day scholars. These are—

(*a.*) *By a certain standard of instruction being required of the children before being taken on as half-timers.*
This would tend to diminish the 3rd class mentioned above.

(*b.*) By the school certificate of half-time children being only signed by teachers under government inspection.

(*c.*) By the teacher certifying for the children's attendance up to the age of 13 years, and answering for their educational fitness on being passed for full time."

The employment of Women in Cotton Kilns.

In the Liverpool district there are several kilns at work for the purpose of drying cotton waste which has been wetted at sea or elsewhere, and of thus restoring it to useful purposes. Of all places where anything connected with manufacture is to be found, these are the most dangerous to the workers, and the most disreputable in character, so far as one can judge of the deportment of the women employed in them. Women, some of the lowest class, work there; and their language has been reported to me as occasionally most fearful and disgusting. I visited several of these kilns when at Liverpool awhile ago, and Mr. Coles reported of them on the 21st October last year as follows:—

"I saw in a newspaper about a week or 10 days since an account of a fire in a cotton drying kiln at Liverpool on a Sunday, and the narrow escape from death by burning of a number of females who were employed in the kiln on that day. I therefore directed Mr. Richmond and Mr. Maitland to visit

some of these places last Sunday to see if they could discover any cases of this illegal employment. I enclose Mr. Richmond's report on the subject, and await your instructions thereon."

Mr. Richmond's report was as follows :—

"October 19, 1874.

"On Saturday last I saw Major Greig, the chief constable, and spoke to him about the cotton kilns. As many of them are situated in the worst parts of the town he recommended me to take two detectives with me. Accordingly, last night Mr. Maitland and I started with the two detectives, told off for the purpose by Major Greig, and visited a good many kilns. At one, in Thomas Street, next door to that where the fire occurred last Sunday, we found four women at work at 10 p.m. besides the kiln woman. This kiln belongs to a Mr. Bayley, and the kiln women are employed by him. Mr. Bayley supplies the fires, and makes a charge to the cotton dealer for use of the kiln.

"The other four women are in the regular employ of William Smethurst, cotton dealer, to whom the cotton which is now being picked and dried, belongs. These unfortunate women informed us that they came to work about 8 o'clock on Sunday morning, had worked all day, and were going to work all Sunday night and Monday—36 hours at a stretch !

"Mr. Maitland and I passed by the kiln to-day (Monday), and saw the same women at work.

"At the kiln next door, also belonging to Mr. Bayley, and at present used by Mr. Crackett, we found the kiln woman, who told us that the women had been working all day, but had gone home to supper. We visited this kiln three times between 10 and 12 p.m., but the women, although expected, had not yet returned.

"We visited a kiln in Fleet Street at 11.30, and found a foreman, a forewoman, and the kiln woman, but work had not commenced, nor were the women expected till after 12 o'clock. They had not been working during the day, but would work all night when they came. No work was going on at the other kilns visited by us.

"Even with the aid of the detectives we had great difficulty in finding the kilns."

As a matter of course I directed prosecution to be taken against Smethurst, for employing women on Sundays. The cases were shortly afterwards heard before Mr. Raffles, the stipendiary at Liverpool. The defendant pleaded guilty, and ignorance of the law. Mr. Raffles inflicted only a small penalty, 10*s.*, and 1*l.* 14*s.* costs, as this was the first case of the kind; but remarked that he would deal severely with any such instances in future. In consequence I have reason to believe that Sunday work in the Liverpool cotton kilns has been discontinued.

Thrift among the Working Classes in the Textile Districts.

On the 21st of May last Mr. Assistant-Inspector Coles forwarded to me a comprehensive report on this subject: and hoping that that to which it relates may be a stimulant to other employers to follow the same example, I give it here in full; for it is one of those things with which I not only entirely coincide, but one, which by social lectures and otherwise, I have endeavoured to instil into the minds of the working classes for many years:—

"Want of thrift has hitherto been considered one of the great faults of the operative class, and therefore one hails with pleasure any institution which tends to foster among them a more provident and careful character.

"The establishment of penny banks as connected with schools and churches in the poorer parts of some of our manufacturing districts is doing much to promote saving habits among our working classes; and I am glad to find, after making careful inquiry, that such institutions have largely increased of late years, and are much patronized by those for whose good they are established.

"I annex a deposit book of one of these institutions situated in a crowded factory district of Manchester; and also a notice which has been circulated in the factories and workshops of the neighbourhood. The book gives the rules pertaining to the management of the institution.

"I am informed that during the past year the number of depositors in this bank was over 400.

"I should like to see such institutions established in connection with all our large factories and workshops, especially where married women are employed. And I think the following remarks on one I have lately come across, will show the good they may produce:—

"Some time since, on going through one of our largest cotton mills in Salford, I observed by a notice hung on the walls that, a penny savings bank in connection with the works had been established, where, sums of from one penny to 10*l.* are received from the workpeople, and interest at the rate of 5 per cent. given on sums over 10*s.*, the firm having consented to guarantee the amounts invested. The notice went on to say, 'Those of our 'hands that have not begun to save are reminded that, although 'trade is rather good at present it may not always remain so; 'and they are earnestly requested to avail themselves of the 'opportunity to provide for less prosperous times.'

"On making inquiry I found that this call had been fairly responded to by the hands employed. This mill gives employment to upwards of 800 hands, of whom above 500 are females.

"The sums deposited weekly, vary from 6*d.* to 5*s.* This institution, besides promoting saving habits among the workpeople generally, is a great boon to the married women, and is

taken much advantage of by them. It acts to them as a kind of lying-in club, where, many months before the birth of her infant, the mother can make a little provision for the event by laying aside a *small sum weekly unknown to her husband, and without his being able to meddle with it.* This enables her not only to meet the time with more comfort around her, but also does away with the necesity of her returning to her work in the factory so soon after her confinement; thus saving her own health and giving a better *chance to the infant of surviving future hardships.*

"The deposits in this factory bank were in 1873, 70*l.* 4*s.* 10*d.*; withdrawals, 58*l.* 4*s.* 1*d.*; number of depositors, 63; accounts open December 31, 23.

Such, Sir, is Mr. Coles' report, and from it it is quite clear that, if such a system between masters and workers was more general, less would be said about the evil effects of married women returning to work early after their confinement than now is.

What a pity it is therefore, considering the wages the working classes have had for so long a period, that such self helps are not more frequently commenced in early life and carried through to the end. What useful examples by mothers to daughters!—instead of drunkenness both at home and abroad: and the brutal conduct by husbands, which seems now-a-days to have become as epidemical, as it is a disgrace and discredit to the age in which we live.

Mr. Coles has underscored two sentences at the close of his report which I have rendered in italics. They speak volumes in my experience, and which I have tried in vain both in private and once even in these my reports* to render more prominent and general, than in ordinary factory life, in fact in the whole country. I had an admirable sketch made of a double florin in gold, which I denominated an Albertine, in the hope that it would become a coin of the realm, just as the half-franc piece is in France, and the dollar in America; and which by its circulation in wages and otherwise would have been a silent but powerful means of enforcing the savings of which Mr. Coles speaks so feelingly. For the wives of the working classes, receiving them in wages among other coin would have put many of them carefully away unknown to their husbands, and afterwards have deposited them in the Government savings banks, where they would have lain either for the provision of hard times or for difficult occasions, and where they could not possibly have been "meddled with" by the husband, for the want of knowledge of the fact.

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* See my report for April 30, 1861, p. 43.

Small items in the social or moral condition of a nation are sometimes valuable, and so would this have been if it could have been carried out! for the wives of the working classes never part with gold if they can help it, and thus an economic light would have been shed upon many a hearth, which at present is dimmed by luxurious and vicious habits.

Moreover, this "Albertine" would have been looked upon in thousands of cottage homes as the harbinger of peace and goodwill where other lectures on social life are never read; and where a counteracting influence to bad habits is best fostered by a reprover which is not oracular nor to be remonstrated with, but speaks to the pocket, in unmistakeable language. In how happy and fruitful a manner would it have met the case of a well-to-do nail maker in the Black Country who recently estimated his own and his son's weekly earnings in making "hundreds" to produce to each of them 7*s.* a day, whilst his wife and daughters were also earning, in making "thousands," a proportionate sum; and exclaimed, "Aye, we can keep "the house on our earnings, and we can then drink what is "earned by the wife and lasses."

In connection with this social subject it is not inappropriate to bring under public notice the following fact from county Donegal, in Ireland; not connected with factories it is true but partly with workshop labour, and hence its introduction here, for it seems to be the beginning of good things for the sister country, which let us hope may be more widely followed.

A Fact from County Donegal, Ireland.

Some time ago I had a letter from Sub-Inspector Bateman, containing the following:—

"My dear Sir,

"By Lord George Hill's desire, I send you herewith a second pamphlet containing later accounts of his improvements. The picture he offers you of the present state of the large district under his enlightened régime, appears to me to be rather under than overdrawn. The population was, I thought, very healthy looking. School attendance was good. Stocking knitting is carried on in nearly every house. The yarn being sent from England, home spun yarn is now little used."

The receipt of this letter induced me to write to Lord George Hill to inquire of him directly the former and present condition of his estate in Donegal, having particular reference to any manufactures I might find there.

In respect to manufactures, however, I was disappointed, for what there are at Gweedore, are of home growth. But the history of Lord George Hill's movement is worthy of a record among the vast social efforts now making to improve the general condition of the workshop workers in Ireland.

In the year 1838, and subsequently, Lord George Hill purchased five small estates, detached, in the parish of Tullaghobegley, on the north-west coast of the county of Donegal, which contained altogether upwards of 24,000 acres, and 2,500 inhabitants. Before this time, these estates being possessed by different landlords, who neither visited them nor expended any money upon them, the inhabitants were in the greatest misery. Famine and disease were periodical; and as there were no roads nor bridges in the district, the people had no means of export or import. No one took any further interest in them than to extract what money they could from them, under the name of rent; and in one instance when the landlord came to visit his property, all the tenants took to their boats and coraghs, and remained in them, till he was gone.

Let us for a moment contrast the difference between 1838 and 1868, in the state of Gweedore.

In 1838.	In 1868.
The roads and bridges few and scarcely passable. No carts used. The land held in common. Constant quarrels and litigation as to trespass. No progress in agriculture.	Roads and bridges numerous and in excellent condition. Between 30 and 40 carts. Every tenant has his farm to himself. Petty sessions every fortnight and very little business. Seven hundred acres reclaimed since the land was divided. Hay, turnips, clover, and grass seed sown. Three post offices and daily mails, and a first rate corn mill with kiln and saw mill attached.
No post office nearer than 10 miles. A very primitive corn mill, incapable of clearing the corn or of sifting the meal, and none better within 30 miles. No baker, nor bread sold within 10 miles. No market for produce.	An excellent baker resident at Gweedore. A large store at which oats are purchased and to which eggs, hides, fish, and butter are bought in large quantities.
Nothing like a shop.	An extensive shop at which all necessaries can be obtained at a moderate price.
No medical man nor dispensary within 10 miles.	Dispensary and weekly attendance of a medical man.
No Protestant church, burying-ground, or clergyman within 10 miles.	A school-house licensed for Divine service (congregation
Only three houses in which lime had been used, the rest all dry masonry, or stones laid in mud.	
No hay could be bought nearer than 12 miles.	

In 1838.	In 1868.
No inn or decent house.	averaging about fifty), a Protestant burying-ground, and resident clergyman.
Little butter fit to eat, and in small crocks.	More than 350 houses, in which lime and whitewash has been employed.
Not a boat-pier on the coast.	Model farm at Gweedore producing from 50 to 60 tons of hay.
Anchorage under Gola Island and in Gweedore Bay unknown.	Gweedore Hotel much frequented, from which a car with the Dublin mails starts at nine a.m., and returns at one p.m.
No trade or home manufactures.	Good market-butter put into wooden vessels.
Rent irregularly paid and difficult to collect.	Quay and landing-place at Bunbeg for vessels of 150 tons.
	Vessels can now be chartered to Bunbeg from any other port, and the anchorage is properly buoyed.
	Gweedore hand-knit socks and home-made cloth exported, a sum of 550*l.* having been paid for the former by Messrs. Allen and Solly, of King Edward Street, London during the last 12 months.
	Rent regularly paid.

No. of cattle belonging to tenants	-	-	1,433
„ of sheep „ „	-	-	3,123
„ of horses „ „	-	-	285
„ of pigs „ „	-	-	93

Lord George in writing to me on the subject adds,—

"We receive large quantities of yarn from wholesale dealers in King Edward Street, London, which gives great employment to the women. These are chiefly for making knickerbockers and ladies stockings. Also, we supply them with the old well known Gweedore grey socks for men, with which we have supplied Messrs. Hames and Otley for many years. A great deal of light grey frieze, and white and red flannel is made by the people as well as tammy, a blue woollen material for gowns. When I commenced operations I could get no bread, but had a cask of biscuits from Greenock, and had no post office within 10 miles; but I soon established runners, and have run a mail car for many years. Giving premiums I have found very useful.

"The people of Gweedore very soon understood that their landlord did not come among them to rob them of their land, or to drive them away, and they have always conducted themselves towards him with much propriety, civility, and kindness; for they saw his only object was their welfare, and to do justice between man and man. It is right to state that, even with the increased rent, no tenant pays more than 5*s.* 6*d.* per acre, that being the highest rent, the average being from 2*s.* to 3*s.* per acre. These rents include right of mountain grazing and cutting turf, or of seaweed for manure and kelp making. Many of these tenants have 12 head of cattle, and from 20 to 30 sheep belonging to them. But one tenant pays 6*l.* per annum, five 5*l.* per annum, decreasing to only 4*s.* per annum. Premiums given annually by the London Irish Peasantry Society, and by the landlord, have very greatly tended to stimulate the people to improve the comfort and cleanliness of their houses, the quality of the butter, of the knit socks, and other woollen manufactures of Gweedore."

There would thus be much hope for Ireland if every landlord felt the same interest in his estate and territory as Lord George Hill; and the tide of emigration which has lately set towards other countries would soon flow back again to the now neglected hills and valleys of this fair country.

Dangerous Machinery.

So many and such serious accidents have happened by dangerous machinery left exposed to the ignorance or carelessness of workers that everything which comes to my knowledge tending to their safety I think it useful to recommend as extensively as possible. And though I had very much rather persuade, I am often tempted to wish I had more power to compel employers to protect their machinery more completely than I can now do.

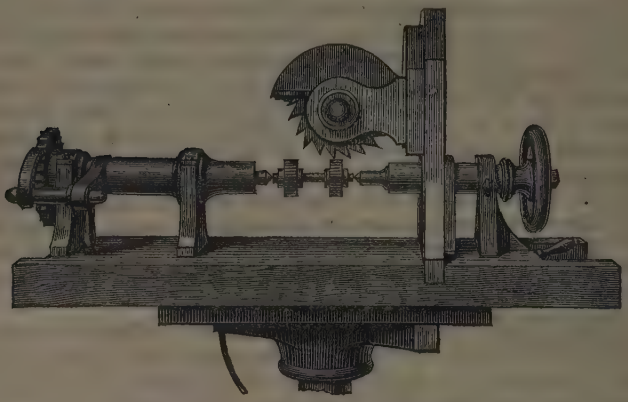
Amongst other instances there are in most flax spinning mills rollers made of boxwood, which are used in drawing the fibre of flax after it has been steeped in water, and these rollers are fluted by a traversing chisel or knife, an operation that requires to be repeated, as the flutes are crushed or worn by repeated use.

The knives which cut these rollers have been for the most part hitherto open and exposed, and the hands of the children (mostly boys) that work them, have suffered severely by this exposure.

Recently I have had sent to me however, a drawing of an invention by which this suffering may be effectually prevented, and I have received permission to copy it into this Report, in order that a method so useful and yet so

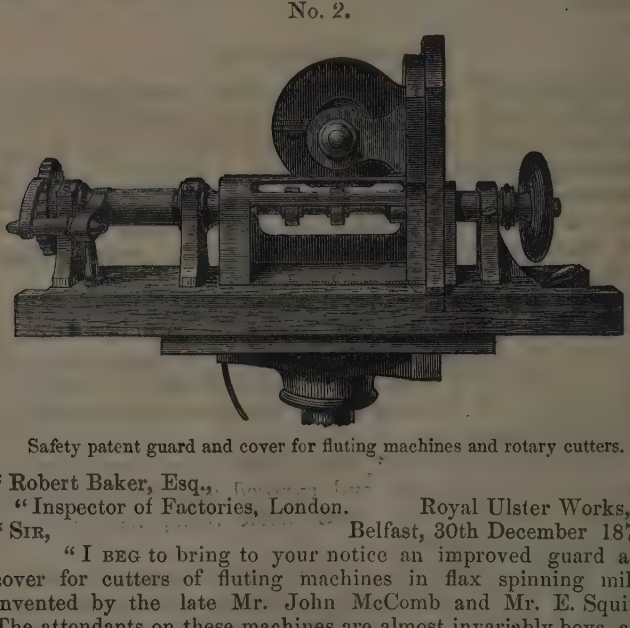
simple, may be made as widely known as possible. The following is a copy of the letter which was forwarded with the drawing :—

No. 1.



Old form of cover for fluting machine cutters.

No. 2.



Safety patent guard and cover for fluting machines and rotary cutters.

"Robert Baker, Esq.,

"Inspector of Factories, London. Royal Ulster Works,

"Sir, Belfast, 30th December 1874.

"I beg to bring to your notice an improved guard and cover for cutters of fluting machines in flax spinning mills, invented by the late Mr. John McComb and Mr. E. Squire. The attendants on these machines are almost invariably boys, and the inability to properly guard the cutter of the machine have

led to a great many accidents by which many of the boys have been more or less maimed. It was during the hearing of a suit brought by a young man to recover damages a short time since from Messrs. P. Johnston & Son, of this town, in whose factory he had been employed, for the loss of his hand while attending one of these machines, that the idea of an improved cover and guard suggested itself to Mr. McComb, so that such accidents might be prevented from even the carelessness of the attendant. Messrs. Johnston's manager having stated during the trial that the machine in question was as well guarded as possible, and that the accident could only have arisen from carelessness on the part of the attendant, and that any further guarding of the cutter would interfere with the efficiency of the machine, and prevent the ready changing of the rollers, which is necessary. Had Mr. McComb lived he intended waiting on you personally, and explaining the advantages of this guard in the prevention of accidents.

"I enclose photograph of the machine showing the original and improved form of cover. The former is no protection for the really dangerous part of the machine, while the latter is an effectual safeguard, and does not interfere with the working, and is a very simple and complete contrivance.

"Dr. Purdon highly approves of the improved cover and guard, as you will see by a copy of his letter enclosed; and, I think, if you can understand from the photograph and the explanation I have given, you will not hesitate to recommend its adoption.

"I enclose copy of Mr. Squire's letter to the owners of factories, in which he states that the Milfort and others have adopted it, and that he transfers his rights in the patent for the benefit of the widow and orphans of the late Mr. McComb.

"I am the brother of the widow, and occupy the position of book-keeper and cashier in the firm of Messrs. Marcus, Ward, & Co., and would feel thankful for a letter approving of the patent.

"I am, Sir,
"Your obedient Servant,
"JAMES ADRAIN."

"Milfort Mill, Belfast,
"GENTLEMEN, December 1874.

"I BEG to introduce the guard and cover for fluting machine cutters patented by the late Mr. John McComb and myself. It has been admitted by all parties to be an effectual safeguard against the numerous accidents so often occurring to boys in their attendance on the machines. This guard and cover is at present in operation in several mills here in Belfast, and at Milfort Mill it has been on all the machines for some months and has given every satisfaction. It gives no additional trouble and is not at all in the way of the attendant working the machine, and, as before stated, is an effectual safeguard againt all possibility of accident.

"The expense (1*l.* of royalty per cutter) is so small that it need keep no one from adopting it, when taken in comparison with the benefits to be derived: and a few shillings per cutter (say 6*s.*) will make the whole affair complete.

"I may also add that I am the more interested in having this guard and cover brought into general use now, as all the proceeds from this patent are to go to the widow and children of our late lamented friend, and I feel sure that, if for this reason alone, and laying aside the real value of the guard to yourselves, you will, for the sake of the widow of one who was for over 35 years connected with the spinning trade, not withhold your orders. You have herewith a photo view of the guard and cover, showing the complete fencing; and the machines, with all complete, may be seen at Milfort Mill, Falls Road.

"Mr. McKeown, commission agent, Waring Street, will call on you in a few days when, I trust, for the above stated reasons, you will give him your orders.

"I am, Gentlemen,
"Yours respectfully,
"EDWIN SQUIRE."

Copy of Dr. Purdon's letter referred to in the above:—

"Messrs. McComb and Squire.

"GENTLEMEN, Belfast, October 1874.

"I CONSIDER that the guard and fence you have invented for the fluting machine is most valuable, as it renders the possibility of an accident occurring almost impossible, without in the least impairing its efficiency. This is so great a desideratum that every one ought to be obliged to adopt it.

"I remain, yours faithfully,
"C. D. PURDON, M.D.,
"Certifying Surgeon."

Overwork in Milliner's Workshops.

Overwork in milliners workshops still continues, notwithstanding that many occupiers have been fined, and some heavily, for their discreditable proceedings. The following letter has been forwarded to me by Mr. Sub-Inspector Astley, being sent to him from Dublin last May:—

"SIR,

"IT is very desirable to bring under your notice many practices which exist in the workrooms of various dressmakers through the city, with a view to your attention being drawn to the length of the working hours.

"It is right to mention that the monster houses are generally well regulated, and fair in their treatment of their employés.

"It is in the second-class houses, chiefly engaged in the dressmaking business, where the poor girls seem to suffer from length of working hours. These houses are in Grafton, Henry, Dawson,

and other streets. The working hours are 10 daily, from 9 to 7 o'clock, without time for dinner or relaxation.

"Considering the small amount of remuneration generally given to these poor helpless girls the number of hours appear to be monstrous. And if such time be illegal your kindness will decide, and your active supervision of such workrooms, it is believed, will have a beneficial effect. If your interference is not available for such cases public opinion must be evoked in the matter.

"(Signed) COMMON HUMANITY."

The above letter was sent to Mr. Sub-Inspector Astley, who had instructions from me to see the meal times enforced. But it shows the need of the protection which the law gives small though it be, under the Workshops Act, to these poor needlewomen, who in crowded and ill-ventilated rooms are still fulfilling the "Song of the Shirt," and apparently will continue to do to their lives end.

Then, again, in May last, Mr. Sub-Inspector Richmond complained of four millinery workshops in Wigan, and finding females employed in each an hour and longer after work ought to have ceased. The parties respectively having been previously cautioned by him not to be guilty of overworking, were prosecuted and fined.

Mr. Sub-Inspector Johnston also on the 26th of June last prosecuted and fined two dressmakers in Birmingham for employing 16 females illegally, and fined them 24*l.*, and 12*l.* 4*s.* 6*d.* costs.

I am happy to be able to add that in one considerable fashionable town in my division a ladies committee have commenced a society for the protection of milliners discharged for giving evidence of their overwork, with power to find them other situations, and to maintain them till they do find them.

Badly Ventilated Printing Offices.

Speaking of the want of due ventilation in milliners rooms leads me to the consideration of a similar complaint of the reading closets of printing offices.

"A model of a Pentonville prison cell," says Mr. Chaloner, who is the pioneer of improvements in the ventilation and salubrity of printing offices, "is on view at the Exhibition. If models of a good many nameable reading closets could be sent to the Exhibition how proud some practical employers would be of them, their practicability, by the way, being on a level with the rest of it. Reeking, blinding, stifling, pestiferous, disgraceful dens, which, to complete their inhuman ghastliness, need only have

exhibited a pair of human lungs in addition, from one of the victims of these practical and pious arrangements."

My attention has been called to this serious evil in my own division, and I have had examinations made of many printing offices since then. No doubt bad enough the case is in some towns, but not in so many as I had been led to anticipate, I suppose from the fact that space is not so valuable in the country. Permit me to give you one complaint and two examinations, by which you will perceive that the complaint is here and there even with me real enough, and requires a remedy. I suppress for the present the description of the towns for the sake of the informants.

"Sir,

"Feeling assured from the very honourable position which you occupy that you will sympathize with us, and I tender you these facts, and beg for your speedy interference. Here at the county office there are 20 men besides boys, many of whom have worked for years in a very badly ventilated room. Now, the overseer has taken it into his head to have others down from the room over us (a light healthy room). Formerly the air we used to breathe became foul in an hour, and the sour smell from the breath of 20 men and as many gas lights can only be imagined by going into the room from the fresh air that an all-wise Creator intended we should breathe. I see in the Factory Act that overseers are to do their utmost to prevent overcrowding. What the effect of this unnecessary overcrowding will be with all lights on, I dread to think, as before this took place others besides myself have felt sick and giddy after being shut up in this place for a very short time. Young boys, too, much under 16, frequently work on a Tuesday from six in the morning till nine at night. Respected sir, these are facts, and can be proved by an Inspector (who will, no doubt, fear no one), paying a visit to this office on a Tuesday evening about 7 o'clock."

On receiving this letter I directed inquiry to be at once made into the allegations it contained, and the answer was—

"With reference to the letter of complaint of the overheated and crowded printing office spoken of therein, we have made strict inquiry as to the numbers employed in the room, and the result is that we considered it unfit to contain even half of the number stated to be employed therein on busy nights, and especially when gas is lighted. The employer was out at the time of our visit, but we left some positive directions with the manager, and I could hear from him at once as to what he proposes to do to remedy the evil, in which there must be no delay. I expect to hear from him in a day or two, and to go to the place soon after, and I will then make a further report to you upon it. I have every reason to expect his ready acquiescence in our suggestions."

Let me give another examination,——— ; but as I have declined to give the locality of the former, so I hesitate to give that of the latter, trusting that both will be rectified without further exposure.

"In No. 1 office there are four reading closets excessively small and consequently unhealthy. In three of them, which are only 9½ feet high, there is no provision for ventilation except a window, which is necessarily so close to the readers as to keep them in a constant current of cold air, aggravated by frequent opening and shutting of the door as copy is brought in.

"The great heat produced by the gas in such confined spaces, and the cold draughts of air which are necessary to prevent their occupants being stifled, must be most prejudicial to health, although a few instances may be cited of persons with strong constitutions who have been able to stand the ordeal for many years. The fourth office is a little lighter with a skylight above. The door opens into the composing-room, and is frequently left open; but the atmosphere there is not sufficiently pure to be of much benefit. In cold weather the occupants have the choice of a stream of cold air pouring down on their heads, or of inhaling that which cannot fail to be most injurious to them.

"Subjoined are the cubic contents of and numbers of persons in each.

"Closet No. 1, of irregular shape, measures at the ends 2 ft. 9 in. and 5 ft.; sides, 9 ft. 1½ in. and 9 ft. 7 in.; height 9 ft. 6 in., and contains, therefore, about 360 cubic feet, and is occupied by two readers using two argand burners.

"Closet No. 2, irregular in shape, measuring—

Ends, 2 ft. 9 in. and 5 ft. 4 in.; sides, 7 ft. 9½ in. and 7 ft. 6 in.; height, 9 ft. 6 in.; contains about 291 cubic feet, and is occupied by two readers using one argand burner.

"Closet No. 3, of irregular shape, measures—

Ends, 3 ft. 3 in. and 3 ft. 7 in.; side, 9 ft. 3 in.; height, 9 ft. 6 in., which gives rather less than 307 cubic feet, and is occupied by one reader using one gas burner.

"Closet No. 4 measures—

Sides, 5 ft. 7 in. and 5 ft.; breadth, 3 ft. 9 in.; height, about 12 feet; and contains about 270 cubic feet, and is occupied by two readers using one gas burner.

"In No. 2 office the reading closets are three in number, simply formed by partitions projecting from the wall in the coolest part of the outer composing-room. The air is no worse than in most newspaper offices, openings being provided for the admission of as much outer air as the compositors can bear.

"In No. 3 office there are three reading closets of tolerable size. The gas jets are provided with shades which reflect the light, so as to necessitate less gas being used, and protect the eyes from the glare. I found them clean and cheerful in appearance, having recently been coloured. There is a window to each, which affords ventilation.

"Dimensions, No. 1, about 1,000 cubic feet, occupied by two readers using one gas burner.

"Dimensions, No. 2, about 1,414 cubic feet, occupied by four readers using two gas jets.

"I would wish to add that in the composing-rooms of these newspapers, provision is made for the admission of a large amount of fresh air. At those of Nos. 1 and 3, which were constructed especially for the purpose for which they are used, a number of contrivances have been adopted from time to time, and in one of them an expensive ventilator has been fitted up in the centre of the lofty roof, with gas burners to create an upward current, which, however, I understand, does not answer. The managers of all, however, complain that the compositors close the ventilators, and do not like to have as much air as they would wish to give them.

"This is easily explained. The heat caused by the powerful gas lights renders them very susceptible and unable to bear cold draughts, more especially in the winter, when, of course, less air is admitted, and the condition of the rooms much worse than in hot summer weather.

"The whole system of ventilation in all cases is a struggle between blasts of hot and cold air, and this must continue to be the case, and the complaints of the discomfort and unhealthiness to prevail, until the root of the evil is dealt with, and the burnt air from the gas jets conveyed away and not suffered to mix with the air of the apartments."

Flax Scutching Mills.

Mr. Sub-Inspector Astley reports to me on this subject, from which report I make the following extracts:—

"The flax scutching season may be said to extend from September to April in each year, though many mills that are not busy will not remain open so long. From various causes there is not so much flax grown in Ireland now as formerly, and consequently a great many of the scutching mills are closed.

"In those mills that are working, the hours of labour as a rule are not excessive. Still, on certain occasions, they do work late by lamp or candle light. Although the entire period between the beginning and ending of the day's work exceeds the Factory Act limit of 12 hours, yet if the times for meals and the short time necessary for clearing away the "débris" from behind the machines, and for oiling and cooling the bearings of the shaft be deducted, the daily hours of actual labour will not exceed 10.

"If, then, the Factory Act periods of labour, 6 to 6 or 7 to 7, with two hours for meals be enforced without any allowance being made for such stoppages, a curtailment of the day's labour will ensue, and the mills will have to remain open a few days

longer in the year in order to get through the same amount of work.

"Again, if the Factory Act is to be enforced at all, it must be rigorously enforced in all scutch mills, large and small, throughout the whole of Ireland, so that all millowners may be put on terms of equality, and that no individual hardship may ensue. Judging from my present inquiries, I cannot find that many children are employed, and but few young persons. Where young persons and children are employed the difficulty of insisting on a surgical certificate would be very great, if not impossible, especially in the small and isolated mills.

"But the reforms which are most urgently needed are, I., better provision for the more secure fencing of the flax rolling or crushing machine. II. Prevention of the inhalation of dust by the workers both by improved means of ventilation and by providing additional space for the workers who prepare and collect the flax before and after the scutching, instead of their being obliged to work (as at present in many mills) in front of the scutching machine, whence all the dust, so injurious to health, is being incessantly given off.

"Amongst the many 'moot' points about which considerable doubt still exists I will note the following. I. Is the Saturday half-holiday imperative in workshops not in connection with retail shops, and in which not more than five persons are employed? II. Can a dinner hour be insisted on in workshops in which the period of labour is 10 (and not 12) hours a day, as for instance 9 a.m. to 7 p.m., the usual hours of work amongst the dressmakers in Dublin? III. What means is afforded to the occupier of a workshop of ascertaining the exact age of a child or young person in his employ, beyond the mere 'dictum' of the parent?

"I need hardly repeat here what I have already stated before, that I have hitherto had no time to make any other than a most cursory inspection of the workshops in my district, and there are still very many which have not been inspected at all."

Mr. Astley will, I daresay, be more satisfied, when all the contemplated arrangements are completed for the more effective visitation of Ireland, and till then he must be patient.

The following gentlemen have been appointed by me certifying surgeons between the 30th of April and the 31st of October last:—

ENGLAND.

W. Nettle, Esq.—Liskeard.
J. A. Magrath, Esq.—Teignmouth.
Hugh S. Price, Esq.—Narberth.
B. L. Powne, Esq.—Chard.
J. D. Robertson, Esq.—Penrith.
C. H. Massiah, Esq.—Chudleigh.
W. G. Northey, Esq.—Tavistock.
W. R. Tollerton, Esq.—Sherston Magna.
R. Roberts, Esq.—Portmadoc.
J. F. Jones, Esq.—Towyn.
J. H. Joy, Esq.—Tamworth.
J. Berry, Esq.—Leyland.
J. J. McKenzie, Esq.—Rugby.
W. F. M. Jackson, Esq.—Smethwick.
Morris Jones, Esq.—Aberystwith.

IRELAND.

B. Gamble, Esq.—Enniskillen.
B. B. Martin, Esq.—Ballybay.
W. Taylor, Esq.—Downpatrick.
T. Wilkin, Esq.—Lisbellow.
A. B. Vesey, Esq.—Magherafelt.

I have the honour to be,
Sir,
Your most obedient servant,
ROBERT BAKER,
Inspector of Factories
and Workshops.

To the Right Honourable
the Secretary of State for
the Home Department.

Appendix No. 1.

Note.—The Prosecution cases under the Factories Acts, and under the Workshops Regulation Acts, 1867 and 1871, are given *separately*. The Workshop cases in Mr. Baker's Division will be found at page 140 of his Report.

Return of Prosecutions for Offences against the Factories and Workshops Regulation Acts, in the District of Robert Baker, Esq., Inspector of Factories and Workshops, for the Six Months ended 31st October 1874.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	Remarks.
1874.			*Informations laid by Mr. Buller.*	£ s. d.	£ s. d.	
July 30	Colthurst and Symons, brick and tile makers, Bridgwater.	J. L. Sealy, V. G. Hickley, John Carver, and J. P. Broadmead, Esqs., Town Hall, Bridgwater.	Employing a boy, George Stacey, without a surgical certificate.	1 0 0	0 8 0	
,,	,, ,,	,, ,,	Employing a boy, George Vickery, without a surgical certificate.	1 0 0	0 8 0	
,,	,, ,,	,, ,,	Same offence in eight other cases - - -	- -	2 4 0	Withdrawn on payment of costs.
Sept. 17	Ellacott and Son, iron founders, Russell Street, Plymouth.	A. Rooker, Esq. (Mayor), and Henry Brown, Esq., Guildhall, Plymouth.	Employing a boy, Wm. Axworthy, without a surgical certificate.	1 1 0	0 13 6	
,,	,, ,,	,, ,,	Same offence in three other cases - - -	- -	1 13 0	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*	£ s. d.	£ s. d.	
May 4	Saml. Cole and Co., Shelton.	H. C. Greenwood, Esq., Stipendiary, Hanley.	Employing a young person for three successive turns in a glass-house.	2 0 0	1 8 6	
July 15	Benjn. Thorley, Longton -	H. C. Greenwood, Esq., Stipendiary, Longton.	Neglecting to cause his child to attend school -	- -	0 14 6	Withdrawn on payment of costs.
Aug. 7	Saml. Smith, Macclesfield	J. B. Wadsworth and G. Goodwin, Esqs., Macclesfield.	Employing a young person without a surgical certificate.	2 0 0	0 13 6	
„ 10	W. K. Broomhead, Hanley.	H. C. Greenwood, Esq., Stipendiary, Hanley.	Employing a young person without registration -	2 0 0	1 1 6	
„	„ „	„ „	Employing a young person without registration -	- -	0 10 6	
„	„ „	„ „	Employing a young person without a surgical certificate.	- -	0 10 6	Withdrawn on payment of costs.
„	„ „	„ „	Employing a young person without a surgical certificate.	- -	0 10 6	
„ 12	Skelson and Plant, Longton.	H. C. Greenwood, Esq., Stipendiary, Longton.	Failing to produce a school certificate for a child	3 3 0	0 10 6	
„	„ „	„ „	Failing to produce a school certificate for a child	- -	0 10 6	Withdrawn on payment of costs.
„	„ „	„ „	Failing to produce a school certificate for a child	- -	0 10 6	
„	Catherine Kevill, Longton	„ „	Permitting her child to be employed full time -	0 5 0	0 15 0	
„	„ „	„ „	Neglecting to send her child to school - -	- -	- -	Withdrawn.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	Remarks.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
Aug. 14	W. and T. H. Hulme, Macclesfield.	W. Carr and G. Goodwin, Esqs., Macclesfield.	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 12 6	
"	" "	" "	Employing a child without a school certificate -	1 0 0	0 10 0	
"	John Bailey, Macclesfield	" "	Neglecting to send his child to school - -	0 5 0	0 10 0	
Oct. 16	Brown and Co., Stoke-on-Trent.	E. Challinor and F. Wragge, Esqs., Stoke-on-Trent.	Employing a young person without a surgical certificate.	2 0 0	3 17 0	
"	" "	" "	Employing a child without a surgical certificate -	2 0 0		
"	" "	" "	Employing a child without a school certificate -	1 0 0		
" 26	Richard Darley, Burton-on-Trent.	Dr. Tomlinson and Genl. Ewart, Burton-on-Trent.	Employing a child without registration - -	2 0 0	0 9 6	
"	" "	" "	Employing a child without registration - -	- -	0 7 0	Withdrawn on payment of costs.
"	" "	" "	Employing a child without a surgical certificate -	2 0 0	0 9 6	
"	" "	" "	Employing a child without a surgical certificate -	- -	0 7 0	Withdrawn on payment of costs.
"	" "	" "	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 12 0	
"	" "	" "	Employing a child before noon and after 1 p.m. on the same day.	- -	0 9 6	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
Oct. 26	Richard Darley, Burton-on-Trent.	Dr. Tomlinson and Genl. Ewart, Burton-on-Trent.	Employing a child without a school certificate -	1 0 0	0 9 6	
"	" "	" "	Employing a child without a school certificate -	- -	0 7 0	Withdrawn on payment of costs.
"	John Morris, Burton-on-Trent.	" "	Employing a young person without a surgical certificate.	2 0 0	0 12 0	
"	" "	" "	Employing a young person without a surgical certificate.	2 0 0	0 9 6	
"	" "	" "	Employing a young person without a surgical certificate.	- -	0 9 6	
"	" "	" "	Employing a young person without a surgical certificate.	- -	0 9 6	
"	John Eaglefield, Burton-on-Trent.	" "	Neglecting to cause his child to attend school -	- -	0 9 6	Withdrawn on payment of costs.
"	James Dickinson, Burton-on-Trent.	" "	Neglecting to cause his child to attend school -	- -	0 9 6	
			Informations laid by Mr. Fitton.			
May. 30	Arthur Davis, printer, Worcester.	C. Sidebottom, Esq., Stipendiary, and Joseph Wood, Esq., J.P., Town Hall, Worcester.	Employing a youth, under 16, without entering his name in register.	1 0 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Fitton*—cont.	£ s. d.	£ s. d.	
May 30	Arthur Davis, printer, Worcester.	C. Sidebottom, Esq., Stipendiary, and Joseph Wood, Esq., J.P., Town Hall, Worcester.	Not keeping a register and not obtaining a surgical certificate.	- -	0 8 0	Withdrawn on payment of costs.
"	William Hudson, founder, Worcester.	" "	Employing a boy without entering his name in register.	1 0 0	0 9 0	
			Informations laid by Mr. Beadon.			
June 15	Stacey and Lace, Bartholomew Ironworks, Newbury, Berks.	J. F. Hickman and J. H. Mason, Esqs., Newbury.	Employing a young person without registering his name.			
"	" "	" "	Employing a young person over seven days without surgical certificate.	1 0 0	0 8 0 0 11 0	Two charges withdrawn on payment of costs.
"	" "	" "	Employing a young person after 2 p.m. on a Saturday.			
July 4	Hy. Edwards, Sheffield Paper Mills Theale.	J. B. Monck, Esq., Capt. Cobham, J. A. Blagrave, and F. Wilder, Esqs., Reading.	Employing a male young person for more than 14 hours in period of 24 hours (to wit 23½ hours).	2 0 0	1 10 6	Employment from 6 a.m. on Saturday till 5.30 a.m. on Sunday.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Beadon*—cont.	£ s. d.	£ s. d.	
Sept. 17	W. Sheldrake, printer, &c., High Street, Aldershot.	Capt. Newcome and G. F. Birch, Esq.	Employing a young person after 4 p.m. on a Saturday.			
"	" "	" "	Employing a young person without registering his name.	1 0 0	1 4 0	
"	" "	" "	Employing a young person over seven days without surgical certificate.		0 15 0	Two charges withdrawn.
"	J. D. Muggeridge, printer, &c., High Street, Aldershot.	" "	Employing a child without school certificate -			
"	" "	" "	Employing a child over seven days without surgical certificate.	1 0 0	0 18 6 0 7 6	One charge withdrawn.
			Informations laid by Mr. Godfrey-Faussett.			
July 2	Messrs. S. Phipps and Brothers, engineers, Bilton, near Bristol.	B. Smith, G. Cave, H. C. Harford, and H. H. Goodeve, Esqs., Lawford's Gate, Bristol.	Employing a boy without a surgical certificate -	2 0 0	1 4 0	
"	" "	" "	Not producing a certificate of school attendance -	1 0 0	0 11 6	
" 6	W. R. W. Smith, printer, Nelson Street, Bristol.	W. Hathway and F. Adams, Esqs., Bristol.	Employing a boy without a surgical certificate -	5 0 0	0 6 0	
"	" "	" "	Not producing a certificate of school attendance -	2 0 0	0 8 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp.*	£ s. d.	£ s. d.	
June 17	James Glover, iron founder, Walsall.	H. Highway and S. Stephens, Esqs., Guildhall, Walsall.	Employing a young person after 6 p.m. - -	- -	0 6 6	Defendant pleaded that boy was kept at work without his knowledge; so charge withdrawn on payment of costs.
„ 23	John Elsmore, West Bromwich.	I. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Allowing his child to work before noon and after 1 o'clock on same day.	- -	- -	Clerical error in summons on part of Magistrates clerk. Magistrate said there must be a fresh summons; but as child was sent to school, no further steps were taken.
July 7	Robert Downes, puddler, West Bromwich.	„ „	Allowing his child to work "in the night" - -	0 10 6	0 16 6	
„	„ „	„ „	Neglecting to send said child to school - -	- -	- -	Magistrate considered one penalty sufficient.
„	Saml. Broughton, labourer, West Bromwich.	„ „	Allowing his child to work "in the night" - -	0 10 6	0 16 6	Or 14 days.
„	„ „	„ „	Neglecting to send said child to school - -	- -	- -	Magistrate considered one penalty sufficient.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
July 7	John Cook, blast furnace keeper, Tividale.	I. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Neglecting to send his child to school - -	- -	0 10 6	This man had only a temporary residence in the district, so payment of costs was deemed sufficient.
"	Walter Coleman, collier, West Bromwich.	" "	Neglecting to send his child to school - -	- -	- -	Absconded. Warrant.
" 21	W. and G. Firmstone, Crookhay Ironworks, West Bromwich.	" "	Failing to produce school certificates - -	- -	- -	Magistrate was of opinion that charge must fail because Defendant, H. O. Firmstone (trading under name of W. and G. Firmstone,) was not *personally* asked to produce certificates. I argued that as occupier rarely, if ever, came to the factory, a personal demand could not be made. Adjourned for further consideration.
"	Wm. Robinson. nut and bolt manufacturer, Darlaston.	"	Employing a child before noon and after 1 o'clock on same day.	3 0 0	0 14 0	
"	" "	" "	Same offence in case of another child - -	3 0 0	0 14 0	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
July 21	Wm. Robinson, nut and bolt manufacturer, Darlaston.	I. Spooner, Esq., Stipendiary Police Court, Wednesbury.	Failing to produce a surgical certificate - -	- -	0 7 0	Withdrawn on payment of costs.
„	„ „	„	Failing to produce a school certificate - -	- -	0 7 0	
„	Levi Lewis, collier, Darlaston.	„ „	Neglecting to send his child to school - -	0 5 0	0 13 0	
„ 28	James Wiley, nut and bolt manufacturer, Darlaston.	I. Spooner, Esq., Police Court, Bilston.	Neglecting to register name of young person -	1 0 0	0 12 6	
„	„ „	„ „	Failing to produce a surgical certificate - -	- -	0 9 6	Withdrawn on payment of costs.
„	S. Foley and Co., boiler makers, Bilston.	„ „	Neglecting to register name of young person -	1 0 0	0 12 6	
„	„ „	„ „	Failing to produce a surgical certificate - -	- -	0 9 6	Withdrawn on payment of costs.
„	Ephraim Aston, nut and bolt manufacturer, Darlaston.	„ „	Failing to produce a school certificate when so required.	2 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
Aug. 18	W. and G. Firmstone, Crookhay Ironworks, West Bromwich.	I. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Failing to produce school certificate - -	- -	- -	Adjourned from July 21. Magistrate now decided that the section under which information was laid set forth a *personal* request, so the summons must be dismissed. He said, however, that under another section in the Act he could have convicted. I may add that the difficulty was started by the Magistrate himself, Defendant's manager being in Court, "prepared to offer no defence."
Oct. 13	Walter Coleman, labourer, West Bromwich.	Wilson Lloyd and A. Elwell, Esqs., Police Court, Wednesbury.	Neglecting to send his child to school - - -	0 5 0	0 6 0	Brought up on a warrant issued on July 7th.
			Informations laid by Mr. Johnston.			
May 15	G. W. Samson, brass founder, Pershore Street.	George Goodrick and Chas. Sturge, Esqs., Birmingham.	Employing a male young person without a surgical certificate.	2 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
May 1	Wm. Hodgetts, printer, Cannon Street.	George Goodrick and Charles Sturge, Esqs., Birmingham.	Neglecting to keep his factory in a cleanly condition.	- -	0 6 6	Adjourned for a month, when, the Defendant having complied with the law, the case was withdrawn on payment of costs.
„	Martin Clark, gardener, Charles Henry Street.		Neglecting to cause his child to attend school -	0 10 0	- -	Without costs, 12*s.* 6*d.*
„	William Ward, Charles Henry Street.	„ „	Similar offence - - - -	0 10 0	- -	
June 26	George Wilson, ironcaster, Leopold Street.	J. D. Goodman and A. Hill, Esqs., Birmingham.	Similar offence on 12th June - - -	0 5 0	- -	
„	Joseph Butcher, grinder, Leopold Stree	„ „	Similar offence on 11th June - - -	0 5 0	0 12 6	
„	Thomas Hughes, labourer, Allison Street.	„ „	Suffering his child, Annie Hughes, to be employed for more than 6½ hours and not causing her to attend school on 18th June.	- -	- -	Withdrawn, on account of the poverty of Defendant.
„	Joseph Beasmore, brass tap maker, Heathmill Lane.	„ „	Similar offence - - - -	0 5 0	- -	Without costs, 12*s.* 6*d.*
„	John Hasty, Park Street -	„ „	Similar offence - - - - -	0 10 0	- -	Without costs, 12*s.* 6*d.* Had been fined before for a similar offence.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
June 26	Saml. Embley, brass founder, Heathmill Lane.	J. D. Goodman and A. Hill, Esqs., Birmingham.	Failing to produce a surgical certificate for Edward Latchford on 20th June.	- -	- -	Dismissed. The Magistrates deciding that a demand on his wife was not a legal demand, though he was absent and had no manager.
July 10	Wm. Cooper, Rolling Mill, Bradford Street.	J. D. Goodman and Chas. Sturge, Esqs.	Employing three male young persons without surgical certificates.	2 0 0	1 10 6	Two cases withdrawn on payment of costs.
Oct. 23	George Langford, tinman's furniture maker, Cheapside.	Alderman Manton and Charles Sturge, Esqs., Birmingham.	Suffering his child, Thomas Langford, to be employed for more than 6½ hours, and neglecting to cause him to attend school on 14th and 15th October.	0 11 0	1 5 0	A deplorable instance of neglecting his family on the part of a workman who can earn 4*l.* a week.
„ 30	Thomas Crosbee and Son, harness furniture manufacturers, Moseley Street.	Charles Sturge and J. D. Goodman, Esqs., Birmingham.	Employing John Staples, a child for more than 6½ hours on 20th October.	1 0 0	0 12 6	
„	„ „	„ „	Employing four male young persons without surgical certificates.	- -	1 16 0	Withdrawn on payment of costs.
„	Job Staples, cooper, Irving Street.	„ „	Suffering his child, John Staples, to be employed as above, and neglecting to cause him to attend school.	0 5 0	0 12 6	
„	Septimus Peacock - -	„ „	Similar offence on 22nd October - -	0 5 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp.*	£ s. d.	£ s. d.	
May 28	Howarth and Cryer, Rothwell Street Ironworks, Bolton.	Jer. Marsden, Esq., J.P., Mayor, Jos. Musgrave, Esq., J.P., Jas. Knowles, Esq., J.P., and Richard Stockdale, Esq., J.P., Bolton Town Hall.	Employing a child without a certificate of school attendance.	1 0 0	0 14 6	Fined 1*l.* *without costs* (which were paid by Sub-Inspector), the mayor remarking that "he thought it very "hard that the sins "of the parent should "be visited upon the "factory occupier."
,,	Robert Jackson, collier, 6, Bolton's Court, Bolton.	,, ,,	Neglecting to cause his child to attend school -	0 5 0	0 14 6	
,,	Robert Haslam, collier, 3, Morton Street, Bolton.	,, ,,	Neglecting to cause his child to attend school -	0 5 0	0 14 6	
June 13	C. and A. J. Heaton, cotton spinners, Derby Street Mills, Bolton.	Major Hesketh, J.P., and Charles Taylor, Esq., J.P., Bolton Town Hall.	Employing a child before 12 noon and after 1 p.m. on the same day.	1 0 0	0 14 6	
,,	,, ,,	,, ,,	Employing a child before 12 noon and after 1 p.m. on the same day.	1 0 0	0 12 6	
,,	,, ,,	,, ,,	Employing a child before 12 noon and after 1 p.m. on the same day.	1 0 0	0 12 6	
,, 15	Patrick Gillon, stonemason, Laneside, Haslingden.	Major Hardman, J.P., Lawrence Whitaker, Esq., J.P., and Richard Townsend, Esq., J.P. Haslingden Town Hall.	Neglecting to cause his child to attend school -	0 5 0	0 10 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Aug. 6	Richard Baynes, cotton manufacturer, Turner Street Mill, Blackburn.	John Pickop, Esq., Mayor, Henry Polding, Esq., J.P., Robert Duckworth, Esq., J.P., Blackburn Town Hall.	Employing a woman after 6 p.m. on July 15th -	1 0 0	0 13 6	
„	Thomas Shuttleworth (parent), 53, Whalley Banks, Blackburn.	„ „	Neglecting to cause his child to attend school -	0 5 0	0 12 0	
„	Livesey and Haydock, cotton spinners, Commercial Mill, NovaScotia, Blackburn.	„ „	Employing a child without registering his name -	2 0 0	0 13 6	
„	„ „	„ „	Employing a child without a surgical certificate -	2 0 0	0 10 0	
„	„ „	„ „	Employing a child without a certificate of school attendance.	1 0 0	0 10 0	
„	„ „	„ „	Employing a child before 12 noon and after 1 p.m. on same day.	1 0 0	0 10 0	
„	„ „	„ „	Employing a young person without egistering his name.	- -	0 6 6	Withdrawn on payment of costs.
„	„ „	„ „	Employing a young person without a surgical certificate.	- -	0 3 0	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Aug. 13	Edward Fish (parent), warehouseman in Townsfield Mill, 36, Blackburn Road, Darwen.	R. S. Ashton, Esq., J.P., and Rev. Charles Greenway, J.P., Darwen Petty Sessions.	Neglecting to cause his child to attend school -	0 10 0	0 9 0	
Sept. 7	Executors of the late Richard Threlfall, Bridgeman Place Machine Works, Bolton.	George Fell, Esq., J.P., Richard Stockdale, Esq., J.P., and John Green, Esq., J.P., Bolton Town Hall.	Employing a child without a certificate of his attendance at school.	1 0 0	0 16 0	
"	Wolfenden and Son, cotton spinners, Columbia New Mill, Bolton.	" "	Employing a child without a certificate of his attendance at school.	1 0 0	0 14 6	
"	Thomas Gladwin (parent), stonemason, 38, Back Foundry Street, Bolton.	" "	Neglecting to cause his child to attend school -	0 10 0	0 13 6	
"	John Glen (parent), cotton spinner, 55, Lodge View, Halliwell.	" "	Neglecting to cause his child to attend school -	0 5 0	0 14 6	
"	Coop and Booth, cotton spinners, Acresfield Mill, Bolton.	" "	Employing a woman after 6 p.m. on August 18th -	1 0	0 15 0	
"	William Knowles, cotton spinner, Roundhill Mills, Bolton.	" "	Employing a child under 8 years of age - -	- -	0 10 0	Offence transferred to Thomas Higson, operative spinner. (See below).

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Sept. 7	William Knowles, cotton spinner, Roundhill Mills, Bolton.	George Fell, Esq., J.P., Richard Stockdale, Esq., J.P., and John Green, Esq., J.P., Bolton Town Hall.	Employing a child without surgical certificate -	- -	0 11 0	Offence transferred to Thomas Higson, operative spinner. (See below).
„	Thomas Higson, operative spinner, Roundhill Mills, Bolton.	„ „	Employing a child under 8 years of age - -	1 0 0	0 10 0	Transferred from occupier (the above), to workman in accordance with sec. 41 of 7 Vict. c. 15.
„	„ „	„ „	Employing a child without surgical certificate -	- -	0 7 6	Withdrawn on payment of costs, as I considered a fine of 1*l.* and 1*l.* 18*s.* 6*d.* costs, sufficient punishment for a working man.
„ 10	A. W. and R. Dewhurst, cotton manufacturers, Salford Bridge Mills, Clitheroe.	John Mitchell, Esq., J.P., Thomas Bulcock, Esq., J.P., and Thomas Whittaker, Esq., J.P., Clitheroe Petty Sessions.	Employing a child without a certificate of his attendance at school.	1 0 0	0 15 0	
„	Michael Quinn (parent), painter, 12, Water Street, Clitheroe.	„ „	Neglecting to cause his child to attend school -	0 5 0	0 17 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Sept. 17	Thomas Parkinson, Canterbury Street Ironworks, Blackburn.	John Pickop, Esq., Mayor, and James Lewis, Esq., J.P., Blackburn Town Hall.	Employing two children without surgical certificates.	2 0 0	1 0 0	One case withdrawn on payment of costs.
„	„ „	„ „	Employing a child without a certificate of his attendance at school.	1 0 0	0 10 0	
„	„ „	„ „	Employing a child before 12 noon and after 1 p.m. on same day.	1 0 0	0 10 0	
„	John Cunliffe (parent), railway porter, 52, Meadow Street, Blackburn.	„ „	Neglecting to cause his child to attend school -	0 5 0	0 12 6	
„	Charles Thornber, letter press printer, 3, Barton Street, Blackburn.	„ „	Employing a young person without a surgical certificate.	2 0 0	0 13 6	
„	„ „	„ „	Employing a child without a surgical certificate -	- - -	0 6 0	Withdrawn on payment of costs.
„ 21	Abel Catterall (parent), spinner, Haslingden.	Lawrence Whittaker, Esq., J.P., Thomas Whittaker, Esq., J.P., and Richard Townsend, Esq., J.P., Haslingden Petty Sessions.	Neglecting to cause his child to attend school -	0 10 0	0 13 6	
„	Robert Greenwood (parent), quarryman, Haslingden.	„ „	Neglecting to cause his child to attend school -	0 10 0	0 13 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Sept. 21	Henry Green (parent), cooper, Haslingden.	Lawrence Whittaker, Esq., J.P., Thomas Whittaker, Esq., J.P., and Richard Townsend, Esq., J.P., Haslingden Petty Sessions.	Neglecting to cause his child to attend school -	0 5 0	0 13 6	
"	Patrick Lundy (parent), factory worker, Communion Street, Haslingden.	" "	Neglecting to cause his child to attend school -	0 10 0	0 19 0	
Oct. 26	William Nelson (parent), 42, Bow Street, Bolton.	William Makant, Esq., J.P., George Fell, Esq., J.P., and Dr. Livy, J.P.	Neglecting to cause his child to attend school -	0 5 0	0 16 6	
			Informations laid by Mr. Bignold.			
June 3	Kay, Robert, and Sons, bleachers and dyers, The Adelphi, Salford.	J. Walmsley and J. Lee, Esqs., Salford Town Hall.	Employing a male young person by night - -	2 0 0	0 9 0	
"	Brown, Henry, spinner, Reddish.	W. Williamson and G. A. Fernley, Esqs., Stockport.	Conniving at the illegal employment of his stepson in a cotton factory.	0 10 0	0 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
June 5	Smale, William, silk manufacturer, Oxford Road Mill, Macclesfield.	J. Bullock and W. J. Wadsworth, Esqs., Macclesfield.	Employing a child, between 11 and 13, in the manufacture of soft silk without a certificate of school attendance.	- -	0 8 6	In these four (silk) cases I did not ask for a penalty, and the Defendants submitted to a conviction and paid the costs. The employment of children (between 11 and 13) on full time in the occupation of "knotting" scarves, though clearly not within the "raw silk exemption," has been the custom for some time in Macclesfield. The bench expressed their unanimous opinion that such employment was illegal, and the result has been that more than 100 children in Macclesfield, previously on full time "knotting," have been sent to school.
"	Tucker, Henry, silk manufacturer, Macclesfield.	" "	Employing a child, between 11 and 13, in the manufacture of soft silk, without a certificate of school attendance.	- -	0 8 6	
"	Galleymore, George, overlooker in a silk factory, Macclesfield.	" "	Conniving at the illegal employment of his child, between 11 and 13, on full time in a silk factory.	- -	0 8 6	
"	Sherratt, Jabez, overlooker in a silk factory, Macclesfield.	" "	Conniving at the illegal employment of his child, between 11 and 13, on full time in a silk factory.	- -	0 8 6	
" 24	Frost, James, labourer, Stockport.	The Mayor, J. Bailey, and W. Williamson, Esqs., Stockport.	Conniving at the illegal employment of his child, under 8 years, in a factory.	0 5 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
Sept. 25	Lomax, J., and Co., Ruabon, Plas Madoc Pottery, Denbighshire.	G. H. Whalley, Esq., M.P., and Simon Yorke, Esq.	Employing a young person after 9 p.m. - -	1 0 0	0 16 0	
Oct. 26	Pring, John, and Sons, wireworkers, Sandbach, Cheshire.	Major France-Hayhurst and W. R. Court, Esq., Middlewich.	Employing a child on full time - - -	1 0 0	0 9 0	
May 20	Christy, S. and W., and Co., hat manufacturers, Stockport.	The Mayor (J. Bailey) and W. Williamson, Esqs., Stockport.	Employing a child without a certificate of school attendance.	1 0 0	0 9 0	
„	Mott, Thomas, Stockport -	„ „	Neglecting to cause his child, employed in a factory, to attend school.	0 5 0	0 6 6	
Oct. 26	Booth, Samuel, Wheelock, Cheshire.	Major France-Hayhurst and W. R. Court, Esq., Middlewich.	Neglecting to cause his child, employed in a factory, to attend school.	0 5 0	0 9 0	
„	Fletcher, Owen, fustian cutter, Winsford.	„ „	Employing a female during the meal time -	- -	0 14 0	In consideration of this, Defendant undertaking to provide a room for his distant workers to get their dinners, free from the dust of the fustian cutting process, the Bench did not impose any penalty beyond the costs.

RETURN OF PROSECUTIONS—*continued.*

Date	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
Oct. 26	Wood, Enoch, overlooker in a silk mill, Sandbach.	Major France-Hayhurst and W. R. Court, Esq., Middlewich.	Conniving at the illegal employment of a child under 11, on full time, in winding and throwing raw silk.	0 5 0	0 7 0	
„ 28	Sidebottom, J. W. and R., cotton manufacturers, Wellington Road, Stockport.	The Mayor (J. Bailey) and W. Shaw, Esqs., Stockport.	Employing a female young person after 6 p.m.	1 0 0	0 9 0	
„	Burslem, George, picker maker, Swallow Lane, Stockport.	„ „	Employing a child for more than 6½ hours in the day.	1 0 0	0 9 0	
„	„ „	„ „	Employing a child without a certificate of school attendance.	1 0 0	0 7 0	
„	Hanson, Henry, The New Zealand Ropeworks. Stockport.	„ „	Employing a child without a certificate of school attendance.	1 0 0	0 11 0	In this ropery there are 145 children employed, and 50 between the ages of 8 and 10. The Bench impressed on the Defendant the importance of strict observance of the school attendance clauses of the Factory Acts.
„	Glynn, Michael, carter, Stockport.	„ „	Neglecting to cause his child employed in a factory to attend school.	- -	0 5 0	Fine not imposed, on the ground of Defendants poverty.
„	Sherratt, Saml., self actor minder, Stockport.	„ „	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 7 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
Oct. 28	Peter Cox, Sandy Lane, Heaton Norris.	The Mayor (J. Bailey) and W. Shaw, Esqs., Stockport.	Conniving at the illegal employment of his child in a cotton factory.	0 5 0	0 7 0	
„ 29	Bowlas, D. and Co., cotton spinners, Reddish, Lancashire.	Sir J. I. Mantell, Strangeways, Manchester.	Employing a child without a certificate of school attendance.	1 0 0	0 18 0	
„	Reid, Abraham, calico printer, Reddish.	„ „	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 5 0	
„	Bowlas, David, heald knitter, Reddish.	„ „	Employing a child without a certificate of school attendance.	1 0 0	0 9 0	
			Informations laid by Mr. Striedinger.			
May 29	Messrs. Flower and Sons, brewers, Stratford-on-Avon.	J. C. Jones and A. Crowdy, Esqs., County Petty Sessions, Stratford-on-Avon.	1. Employing a child of eleven years of age without having registered his name.	1 0 0		
„	„ „	„ „	2. Employing the same child for a longer period than 6½ hours per diem.	- -	1 4 0	Two charges were withdrawn, on account of extenuating circumstances. Defendants paying costs.
„	„ „	„ „	3. Not producing a school certificate for the same child.	- -		

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Striedinger*—cont.	£ s. d.	£ s. d.	
Oct. 19	The Rugby Portland Cement Company, Rugby.	W. S. Fitzroy and J. Atty, Esqs., County Petty Sessions, Rugby.	1. Employing three young persons for a longer period than 10½ hours per diem.	1 0 0	2 6 6	Three cases were withdrawn on payment of costs by Defendants.
"	" "	" "	2. Employing two young persons after 6 p.m. on and October.	2 0 0		
			Informations laid by Mr. Bowling.			
May 8	Thos. Holland, Tenby Street.	J. D. Goodman and G. Goodrick, Esqs.	Employing a young person without a surgical certificate.	- -	0 9 0	Withdrawn on payment of costs.
June 19	Ashworth and Co., Spencer Street.	C. Sturge and G. Goodrick Esqs.	Employing a woman after six at night - -	5 0 0	0 10 0	
"	" "	" "	Same offence in five other cases - - -	- -	1 12 6	Withdrawn on payment of costs.
"	" "	" "	Being the occupiers of a factory in which the Sub-Inspector of factories was obstructed in the night.	- -	0 6 6	Withdrawn on payment of costs.
"	Maxfield and Co., Spencer Street.	" "	Employing a woman after six at night - -	2 0 0	0 6 6	
"	" "	" "	Same offence in a second case - - -	- -	0 6 6	Withdrawn on payment of costs.
"	Sarah Marshall, Spencer Street.	" "	Obstructing the Sub-Inspector in the performance of his duty.	- -	0 6 6	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
Aug. 7	Manton and Mole, Edmund Street.	J. D. Goodman and C. Sturge, Esqs.	Not keeping a record of the holidays required to be kept in conformity with the law.	1 0 0	0 6 6	
"	" "	" "	Employing a young person without registration -	- -	0 6 6	Withdrawn on payment of costs.
"	" "	" "	Employing a child without school certificate -	-	0 12 6	Withdrawn on payment of costs.
"	" "	" "	Employing a young person without registration -	- -	0 6 6	It appearing that the registration had been made in an old book, I paid the costs in these two cases.
"	" "	" "	Same offence in another case - - -	- -	0 6 6	
" 14	John Smith, metal polisher	J. D. Goodman and S. Thornton, Esqs.	Employing a child for more than 6½ hours - -	1 0 0	0 12 6	
"	James Cook, labourer -	" "	Not causing his child to attend school - -	0 5 0	-	Without costs.
Oct. 16	James Lewis, Birmingham	J. D. Goodman and G. Goodrick, Esqs.	Not causing his child to attend school - -	- -	0 7 6	The offence was admitted, but as the Defendant had, since the information was laid, met with a severe accident, and as the mother of the child was in poor circumstances, I withdrew from the case.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
Oct. 23	Jos. Manning, Aston -	J. Smallwood and T. Ryland, Esq.	Not causing his child to attend school - -	0 5 0	0 5 0	A forged vaccination paper was produced to prove the child to be 13.
, 29	Thos. Driver, Winson Green.	C. Sturge, J. S. Wright, and T. Lloyd, Esqs.	Not causing his child to attend school - -	0 5 0	0 13 6	The child in this case had been forging school certificates.
			Informations laid by Mr. Meade-King.			
June 24	H. W. Everard, smallware manufacturer, Brownsfield Mill.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Neglecting to limewash his factory within a period of 14 months.	5 0 0	0 11 6	
July 15	Frederick Mirl, engineer, Granby Row.	" "	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
"	William Roberts, 10, Cambridge Street, Regent Road.	" "	Conniving at the illegal employment of his son, a child under the age of 13 years, and neglecting to cause him to attend school.	0 5 0	0 8 6	
Aug. 7	Joseph Mercer, printer, &c., 38, Brown Street.	Charles H. Rickards and Henry J. Leppoc, Esqs., City Police Court, Manchester.	Employing a child without a surgical certificate -	1 0 0	0 11 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
Aug. 7	Joseph Mercer, printer, &c., 38, Brown Street.	Charles H. Rickards and Henry J. Leppoc, Esqs., City Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
Sept. 4	Peter and James McGregor, iron founders, Pott Street.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a young person, under the age of 16 years, without a surgical certificate.	1 0 0	0 14 6	
,,	,, ,,	,, ,,	Employing a young person, under the age of 16 years, without a surgical certificate.	1 0 0	0 11 6	
,,	Thomas H. Mee, printer, York Street.	,, ,,	Employing a young person, under the age of 16 years, without a surgical certificate.	1 0 0	0 11 6	
,, 17	Ralph Wood, Lowell Mill, Bradford cum-Beswick.	Sir John Iles Mantell, Stipendiary Magistrate, County Police Court, Manchester.	Employing a child without a surgical certificate -	1 0 0	0 18 6	
,,	,, ,,	,, ,,	Employing another child before noon and after one o'clock in the afternoon of the same day.	1 0 0	0 14 6	
,,	,, ,,	,, ,,	Employing another child without having obtained a certificate of attendance at school.	1 0 0	0 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
Sept. 17	John Mead, 42, Hinde Street, West Gorton.	Sir John Iles Mantell, Stipendiary Magistrate, County Police Court, Manchester.	Conniving at the illegal employment of his son, a child under the age of 13 years, in a factory, and neglecting to cause him to attend school.	0 5 0	0 12 6	In this case, the child had obtained the requisite certificate for "full time" employment from the certifying surgeon, on the production of a baptismal certificate which had been tampered with.
Oct. 26	Thos. Mottram, hat manufacturer, Hyde.	J. Chapman, M.P., Edwd. Hibbert, and E. H. Spillard, Esqs., Hyde Police Court.	Employing a child without having obtained a surgical certificate.	2 0 0	0 13 0	
"	" "	" "	Employing a child without having obtained a certificate of attendance at school.	- -	0 15 0	Withdrawn on payment of costs.
"	" "	" "	Employing a child without having obtained a certificate of attendance at school.	- -	0 15 0	
"	Wolden and Newton, Union Foundry, Hyde.	" "	Employing a child without having obtained a certificate of attendance at school.	3 0 0	0 13 0	
"	" "	" "	Employing a child before noon and after one of the clock in the afternoon of the same day.	2 0 0	0 17 0	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cooke Taylor.*	£ s. d.	£ s. d.	
May 1	John Hawkins and Son, cotton factory, Preston.	J. J. Myers (Mayor) and Jonathan Sellers, Esqs.	Employing children "three-quarters time," that is, before going to school in the morning and again in the afternoon of the same day.	3 0 0	1 4 0	This case was several times adjourned, and ultimately certain women who were stated to be the actual offenders were ordered to pay the fines.
June 6	William Robinson, implement maker, Cockermouth.	Richard Harbord and Richard Bell, Esqs.	Failing to produce factory register when called for.	2 0 0	0 13 6	
"	" "	" "	Employing his child without a certificate of having attended school.	0 5 0	0 13 6	
Sept. 8	Robert Parkinson, printer, Preston.	J. J. Myers (Mayor) and J. Satterthwaite, Esqs.	Employing two young persons over the legal time without being either registered or certified.	4 0 0	1 16 0	
" 9	James Wade, cotton factory, Preston.	J. J. Myers (Mayor) and Jonathan Sellers, Esqs.	Employing six women at 6.9 p.m.	6 0 0	2 8 0	
" 17	William Brown, dyer, Whitehaven.	John Thompson and Robert Gibson, Esqs.	Employing a young person over the legal time without being either registered or certified.	2 0 0	1 0 6	
			Informations laid by Mr. Jones.			
May 15	Thomas Attwood, anvil manufacturer, The Lye.	R. L. Freer and J. B. Cockrane, Esqs., Town Hall, Stourbridge.	Employing a child without having registered the name.	1 0 0	0 10 6	
"	" "	" "	Employing a boy without having obtained a surgeon's certificate.	1 0 0	0 7 0	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cameron.*	£ s. d.	£ s. d.	
July 7	Messrs. Bernard and Koch, Cregagh Mills, co. Down.	Wm. Coates and J. D. Crawford, Esqs., Newtownbreda Court House.	For employing Alexander Moodie, a child under the age of 13 years, before noon and after one of the clock in the afternoon of the same day.	1 0 0	0 5 6	
"	" "	" "	For employing the above-named Alexander Moodie without a school certificate.	1 0 0	0 5 6	
"	Martha Moodie, Cregagh Mills, co. Down.	" "	For not causing her son, Alexander Moodie, to attend school.	- -	0 2 0	A penalty was not pressed for on account of the poverty of Martha Moodie. It was considered that a reprimand from the Bench, together with the payment of costs, would meet the requirements of the case.
			Informations laid by Mr. Richmond.			
June 3	Nathan Taylor, fustian cutter, Croft, near Warrington.	B. Pierpoint and Peter Stubs, Esqs., Warrington.	Employing his son without causing him to attend school.	2 0 0	0 10 0	A full time certificate had been obtained from the certifying surgeon on false pretences.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
July 9	Hale and Matthews, rolled iron manufacturers, Aspull, near Wigan.	Christopher Briggs and John Cannon, Esqs., Bolton County Sessions Room.	Employing a child without having registered his name.	- -	0 6 6	Dismissed. The solicitor for the Defendants, before the cases were heard, privately informed me that he did not intend to contest them, but only to plead extenuating circumstances for mitigation of penalties. In spite of this, however, the first case was dismissed.
"	" "		Employing the same child without a surgical certificate.	- -	0 6 6	These five cases were by agreement with the solicitor for the defence withdrawn, the Defendants paying costs.
"	" "	"	Employing the same child without school certificates	- -	0 6 6	
"	" "	" "	Employing another child without having registered his name.	- -	0 6 6	
"	" "	" "	Employing the same child without a surgical certificate.	- -	0 6 6	
"	" "	" "	Employing the same child without school certificates	- -	0 6 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
July 9	Henry Walsh, collier, Wigan.	Christopher Briggs and John Cannon, Esqs., Bolton County Sessions Room.	Allowing his son to be employed without attending school.	- -	0 6 6	Although the parents in these two cases pleaded guilty and agreed to pay costs, Mr. Briggs refused to convict and dismissed the cases. The one on the strange plea that, as the child was born before his parents were married, he had no parents or guardians. The other because "he really "could not convict "these poor people." The parents were colliers in full work.
„	Patrick Tocher, collier, Wigan.	„ „	Allowing his son to be employed without attending school.	- -	0 6 6	
„ 20	James Shaw, Runcorn -	Sir Richard Brooke and Wm. Wright, Esq., Runcorn, Cheshire.	Allowing his son to be employed without attending school.	0 10 0	0 13 0	The child had been passed for full time on a forged certificate of birth.
„	James Baguley, Runcorn	„ „	Allowing his son to be employed without attending school.	0 5 0	0 14 0	The man refused to pay and went to prison. Costs paid by the Crown.
Aug. 27	Messrs. Earle and King, oil and seed crushers, Liverpool.	R. Roberts and J. W. Cropper, Esqs., Borough Court, Liverpool.	Neglecting to report a fatal accident - -	3 0 0	0 7 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare.*	£ s. d.	£ s. d.	
May 7	Messrs. Pryse and Co., gun makers, Aston Street, Birmingham.	Jos. Chamberlain and G. Goodrick, Esqs., Public Offices, Birmingham.	Employing a child both before noon and after one o'clock of the same day.	- -	0 11 0	Withdrawn. The child (young person) stated on 25th April he was 12, in court he stated on oath he was 13 last February, and I have failed to obtain a certificate of his birth.
"	" "	" "	Failing to produce a surgical certificate for a young person.	2 0 0	0 12 6	
"	" "	" "	Employing a child after 2 p.m. on Saturday	- -	0 11 0	This child, aged 10, failed to adhere to his former statement that he worked every Saturday until 4 or 5 p.m. Case dismissed,
" 8	Wm. Whitehouse, steel toy polisher, Aston Road, Birmingham.	J. D. Goodman and G. Goodrick, Esqs., Public Offices, Birmingham.	Employing a child after six o'clock of the evening	- -	0 9 0	Withdrawn on Defendant agreeing to pay the costs.
"	C. Yoxall and Co., iron founders, Bagot Street, Birmingham.	" "	Employing three young persons after half past six o'clock of the evening.	3 0 0	1 17 6	
June 5	John Gateley, printer, Deaman Street, Birmingham.	C. Sturge and G. Goodrick, Esqs., Public Offices, Birmingham.	Failing to produce a surgical certificate for a child	2 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
June 5	Ebenezer Cheatte, electro plate manufacturer, Buckingham Street.	C. Sturge and G. Goodrick, Esqs., Public Offices, Birmingham.	Employing four young persons after 6 p.m. - -	4 0 0	2 10 0	
„ 12	Henry Payne, 114, Heneage Street.	„ „	Failing to cause his child to attend school - -	0 10 0	0 12 6	Fine only imposed.
„ 19	A. and F. Parkes and Co., edge tool makers, Dartmouth Street.	„ „	Obstructing the Sub-Inspector during the night -	- -	0 6 6	Withdrawn, the Defendant paying the costs, the obstruction being apparently the foolish act of a lad.
„	„ „	„ „	Employing four young persons after 6 p.m. - -	8 0 0	1 19 6	
Sept. 8	Joseph Carter, mule minder, Wemtch Heath.	Sir John Iles Mantell, Kt., Stipendiary, County Police Court, Manchester.	Allowing a young person to work between the fixed and traversing part of a self-acting machine when in motion.	1 0 0	1 0 0	
„ 25	Campbell and Redmayne, rope and tarpauling makers, Collyhurst Road.	— Patterson and — Armitage, Esqs.	Employing two children without certificates of school attendance.	2 0 0	1 3 0	
„	„ „	„ „	Employing a child without a surgical certificate -	- -	0 9 0	Withdrawn at the suggestion of Magistrates, Defendant paying the costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Oct. 8	T. and W. Jones, cotton spinners, Tonge, Middleton.	— Dickens and Saml. Matlatien, Esqs.	Similar offence in three cases - - - - -	2 0 0	1 13 0	One case withdrawn, Defendant paying the costs.
„	„ „	„ „	Employing a child without registering his name -	- -	0 8 0	Withdrawn, the Defendant paying the costs.
„	J. H. Taylor and Co., cotton spinners, Tonge, Middleton.	„ „	Employing a young person without a surgical certificate.	- -	0 8 0	Withdrawn, Defendant paying the costs and promising to use more diligence in future.
„	„ „	„ „	Employing a child both before noon and after one o'clock of the same day.	- -	0 8 0	
„	G. Broadfield and Co., cotton spinners; Tonge, Middleton.	„ „	Employing three young persons during the time allowed for meals.	6 0 0	1 17 6	
„ 23	Wm. Wareing, spindle maker, Percival Street.	F. J. Headlam, Esq., Stipendiary, City Police Court, Manchester.	Employing three children without certificates of school attendance.	3 0 0	1 14 6	
„	„ „	„ „	Employing a child without a surgical certificate -	- -	0 9 0	Defendant paying the costs. The magistrate did not inflict a penalty, believing there had been a certificate which the Defendant had lost in removing from other premises.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Oct. 27	Martin Rourke and Co., Limited, paper makers, Failsworth.	Sir John Iles Mantell, Kt., Stipendiary.	Employing two young persons without surgical certificates.	2 0 0	1 14 0	
			Informations laid by Mr. Maitland.			
July 20	Elizabeth Clarke, tobacco manufacturer, 125, Chester Street, Birkenhead.	J. Preston, Esq., Stipendiary, Police Court, Birkenhead.	Employing two children without surgical certificates.	0 10 0	0 12 0	
"	" "	" "	Employing the same two children without having obtained certificates of school attendance.	0 10 0	0 12 0	
Aug. 24	N. Greening and Sons, wire manufacturers, Warrington.	J. R. Pickmere and Peter Smith, Esqs., Police Court, Warrington.	Employing a child without having entered his name in the register.	2 0 0	0 8 8	
"	" "	" "	Employing the same child without having obtained a surgical certificate.	-	0 8 8	Withdrawn on payment of costs.
"	" "	" "	Employing the same child without having obtained certificates of school attendance.	- -	0 8 8	Withdrawn on payment of costs.
			Information laid by Mr. Bateman.			
June 1	The Irish North-Western Railway Company, Foyle Road, Londonderry.	Henry Darcus, Esq., Mayor, John O'Neill, J. Thompson, J. Hamilton, and W. D. Porter, Esqs., Town Hall, Londonderry.	Failing to produce the factory register at their foundry and workshops on 13th May, said factory being then at work.	- -	0 1 6	Dismissed. The Defendants admitted that there were more than 50 persons employed, including a number of young persons, but contended that railway works were not subject to the Factory

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Information laid by Mr. Bateman*—cont.	£ s. d.	£ s. d.	
						Extension Act, 1867. The magistrates, in dismissing the case, stated their opinion that the definition "manufacturing process," in sub-clause 7, section 3, did not apply in this case, as the articles altered, repaired, &c. were not "for sale." That definition, however, clearly divides itself into two parts, the first of which, including the words "in, "or incidental to the "making of an article, "or part of an article," would apparently apply to the case in question.
			Informations laid by Mr. Mostyn.			
June 6	Edward Bagot, Morriston	N. P. Cameron and J. T. Jenkins, Esqs., Police Court, Swansea.	Employing three females in a factory in the night	6 0 0	2 1 0	
Aug. 18	Ebbw Vale Iron Co. (Limited), Ebbw Vale Works, Morriston.	J. D. James and George Hurley, Esqs., Tredegar.	Employing two females in a factory after 6 p.m. -	2 0 0	1 5 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Information laid by Mr. Monsell.*	£ s. d.	£ s. d.	
Oct. 20	Martin Mahoney and Bros. (Defendants), Blarney.	J. H. Sugene, Esq. (chairman), Thos. Wall, Esq., and Capt. Fagan, Blarney Petty Sessions.	Against Messrs. M. Mahoney Bros., for unlawfully employing six young persons within the meaning of the Factory Acts, 1833-1871, upon the 25th day of September, after six o'clock in the evening.	1 0 0	0 16 0	Five cases withdrawn upon the payment of costs, at the earnest solicitation of the Bench.
	Patrick Coleman, Kerry Pike.					
	Tim Callaghan, Cloghroe					
	Michael Buckley, Blarney.					
	Jer. Tworny, Blarney -	Witnesses.				
	Denis McNamara, Blarney.					
	Michael Callaghan, Cloghroe.					
	Edward Riley, Blarney -					

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
			PROSECUTIONS UNDER THE WORKSHOP REGULATION ACTS, 1867 and 1871.			
1874.			*Information laid by Mr. Buller.*	£ s. d.	£ s. d.	
Oct. 17	Gill and Son, drapers and outfitters, Boscawen Street, Truro.	Edward Mitchell, Thos. Solomon, Saml. Pascoe, Thos. Chirgwin, Edwd. Heard, and Geo. Clyma, Esqs., Town Hall, Truro.	Employing eleven girls in a dressmaking establishment after 4 p.m. on Saturday.	- -	6 1 0	All the cases withdrawn on payment of costs.
			Informations laid by Capt. May, R.N.			
June 23	The Duke of Sutherland. Lodge Bank, Lilleshall.	H. Corbett and C. Walker, Esqs., Newport, Salop.	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 12 2	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	The Lilleshall Company, Donnington Wood.	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 18 8	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
June 23	The Lilleshall Company, Donnington Wood.	H. Corbett and C. Walker, Esqs., Newport, Salop.	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 2 6	0 10 8	
"	James Smith, Donnington Wood.	" "	Allowing his child, a female under the age of 16 years, to be employed in the manufacture of bricks.	0 10 0	0 10 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
June 23	John Delves, Donnington Wood.	H. Corbett and C. Walker, Esqs., Newport, Salop.	Allowing his sister, a female under the age of 16 years, to be employed in the manufacture of bricks.	0 10 0	0 10 0	
„	Thomas Jervis -				0 4 0	
„	Sarah Pickering -				0 4 0	
„	John Massey -				0 4 0	
„	Richard Hope -				0 4 0	
„	Enoch Johnson -				0 4 0	
„	Thomas Hancox -				0 4 0	
„	Enoch Hayward -	„ „	Allowing their children, being females under the age of 16 years, to be employed in the manufacture of bricks.		0 4 0	Informations withdrawn on payment of costs.
„	Mark Arnold -				0 4 0	
„	Wm. Hoof - -				0 4 0	
„	Thos. Wakeley -				0 4 0	
„	Hannah Locket -				0 4 0	
„	Samuel Rowley -				0 4 0	
„ 29	The Executors of John Bennett, Wombridge.	H. Corbett and S. Eyton, Esqs., Wellington, Salop.	Employing a female, under the age of 16 years, in the manufacture of bricks.	0 10 0	0 12 0	

Parents, Donnington Wood.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
June 29	The Executors of John Bennett, Wombridge.	H. Corbett and S. Eyton, Esqs., Wellington, Salop.	Employing a female under the age of 16 years in the manufacture of bricks.	0 10 0	0 12 0	
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	0 10 0	0 12 0	
"	John Lowe - - (Parents.)				0 10 0	
"	Wm. Turner - - (Parents.)	" "	Allowing their children, being females under the age of 16 years, to be employed in the manufacture of bricks.	- -	0 10 0	Informations withdrawn on payment of costs.
"	Thos. Phillips - (Parents.)				0 10 0	
July 3	The Lilleshall Company, Snedshill.	Rev. Geo. Whitmore and Major Geo. Newdigate, Shifnal.	Employing a child for more than 6½ hours in one day.	0 5 0	3 3 6	
"	" "	" "	Employing a child for more than 6½ hours in one day.	0 5 0		
"	" "	" "	Employing a child for more than 6½ hours in one day.	0 5 0		
"	" "	" "	Employing a child for more than 6½ hours in one day.	0 5 0		
"	" "	" "	Employing a child for more than 6½ hours in one day.	0 0		
"	John Bourne, parent -	" "	Neglecting to cause his child to attend school - -	- -	0 4 10	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May. R.N.*—cont.	£ s. d.	£ s. d.	
July 3	Danl. Humphreys, parent	Rev. Geo. Whitmore and Major Geo. Newdigate, Shifnal.	Neglecting to cause his child to attend school -	- -	4 10 0	
„	Saml. Broadhurst, parent	„ „	Neglecting to cause his child to attend school -	- -	4 10 0	Withdrawn on payment of costs.
„	Chas. Parker, parent -	„ „	Neglecting to cause his child to attend school -	- -	4 10 0	
„	Chas. Ecclestone, parent -	„ „	Neglecting to cause his child to attend school -	- -	- -	Withdrawn.
Aug. 13	Kinnersley and Co., Kidsgrove.	H. C. Greenwood, Esq., Stipendiary, Kidsgrove.	Employing a female under the age of 16 years in the manufacture of bricks.	0 10 0	0 16 6	
„	„ „	„ „	Employing a female under the age of 16 years in the manufacture of bricks.	0 10 0	0 16 6	
„	„ „	„ „	Employing a female under the age of 16 years in the manufacture of bricks.	0 10 0	0 16 6	
„	James Tilstone, Kidsgrove	„ „	Allowing his child, a female under the age of 16 years, to be employed in the manufacture of bricks.	- -	0 10 6	Withdrawn on payment of costs.
			Informations laid by Mr. Fitton.			
June 15	Thomas Collins, brickmaker, Norton juxta Kempsey.	Rev. W. Douglas, J.P., F. Parker, Esq., J.P., Petty Sessions, Worcester.	Employing Henry Francis, a boy under 13, without obtaining a school certificate.	0 5 0	0 12 6	
„	George Francis - -	„ „	Parent of above boy; neglecting to send him to school.	- -	0 5 0	No penalty inflicted as the parents' plea of ignorance of the law was admitted, and they had incurred much expense by attending summons, &c.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Fitton*—cont.	£ s. d.	£ s. d.	
July 29	William Shakeshaft, of Ledbury.	Osman Ricardo, Esq., and Colonel Money Curle, Petty Sessions, Ledbury.	Employing a boy under 13 in his brickyard and not obtaining school certificate.	0 8 6	0 11 6	
Aug. 4	J. Sharman Wood, of the Butts, Worcester, builder, and owner of Grimsby brickyard.	Rev. J. Pearson, R. Harrington, Esq., T. G. Curtler, Esq., Major Lavie, and E. Bickerton Evans, Esq.	Allowing two boys to be illegally employed on July 11th in a brickyard owned by him at Grimsby, and not obtaining school certificates.	- -	1 4 0 0 17 0	Summary. Dismissed in both cases, owing to doubt as to who was the real occupier of the workshop and the employer of the lads in the eye of the law. The work was partly sublet to a foreman, and he employed a moulder, at whose bench the lads were working. An appeal has been made against the decision of the justices in this case.
„	Richard Hooper - -	„ „	Parent of child employed in above brickyard -	0 0 6	0 7 6	The fact was admitted that the boys had not been sent to school.
„	James Pugh - -	„ „	Parent of child employed in above brickyard -	0 0 6	0 7 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Fitton*—cont.	£ s. d.	£ s. d.	
Aug. 5	John Giles, owner and occupier Hartlebury brickyard.	Rev. T. Baker, C. Harrison, F. Watson, and A. H. Cox, Esqs., Stourport Petty Sessions.	Allowing Charley Green, a child under 13 years of age, to be employed after 2 p.m. on Saturday June 18th.	0 2 6	0 8 0	The magistrates' clerk afterwards explained that he had by an error charged less than the proper costs in this case.
„	W. Green - - -	„ „	Parent of above child, for allowing him to work and not sending him to school.	- -	0 13 0	Case dismissed and costs paid by the Sub-Inspector, who failed to prove that there is a school within two miles at which the boy could attend. At Hartlebury school a certain standard of information is required from all pupils on entering, and this the boy had not attained. He therefore could not enter the school, and there is no other school within reach of his residence.
			Informations laid by Mr. Beadon.			
July 11	Colthurst, Symons, & Co., Dodsdown brick, &c. works, near Marlborough.	H. R. Seymour, R. E. Price, and Dav. P. Maurice, Esqs., Marlborough.	Employing boy under 10 years of age in a brickyard.	0 5 0	1 3 1	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Beadon*—cont.	£ s. d.	£ s. d.	
July 11	Hy. Holmes. Hopgrass kiln, near Hungerford.	H. R. Seymour, R. E. Price, and Dav. P. Maurice, Esqs., Marlborough.	Employing two females under 16 years of age in a brickyard (one of 7 the other of 11 years) -	0 1 0 0 1 0	1 18 3	
Aug. 3	J. Taylor Sainsbury, Byde kiln, Devizes.	T. A. S. Locke, C. Meek, W. Stancomb, and R. P. Nesbitt, Esqs.	Employing a boy under 10 years of age in a brick yard.	1 0 0	1 4 9	
„	J. Taylor Sainsbury, Cane Hill kiln, Devizes.	„ „	Employing two children over 6½ hours in one day	- -	1 15 2	These withdrawn at the suggestion of the magistrates.
„	Mary Dunford, West Lavington kiln, near Devizes.	„ „	Employing a child over 6½ hours in one day -	0 1 0	1 5 6	
„	Francis Snook, Stert kiln, near Devizes.	„ „	Employing a child under 10 years of age in a brick yard.	0 1 0	1 1 7	
„	„ „	„ „	Employing a female under 16 years of age in a brick yard.	- -	0 14 1	This charge withdrawn.
„ 5	Esther Crudge, dressmaker, Devizes.	Stephen Reynolds, W. E. Tugwell, R. W. Biggs, and G. B. Anstie, Esqs., Devizes.	Employing two women after 4 p.m. on a Saturday	0 5 0	0 10 6 0 5 0	One charge withdrawn.
„ 10	Eb. Greenland, Westbury brick-kiln.	Chas. B. Phipps and N. Barton, Esqs.	Employing a child under 10 years of age in a brick yard.	1 0 0	0 14 7	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Beadon*—cont.	£ s. d.	£ s. d.	
Aug. 14	W. P. Winter, Avenue, soda-water works, Southsea.	W. G. Chambers and R. Marvin, Esqs., Portsmouth.	Employing two male young persons after 3 p.m. on a Saturday.	1 0 0	0 19 7 0 8 0	Employed till 11 p.m. One charge withdrawn.
„	Wm. Kingsbury, soda-water works, Landport.	„ „	Employing two male young persons after 3 p.m. on a Saturday.	0 5 0	0 14 0 0 9 0	Employed till 9.50 p.m. One charge withdrawn.
„	Geo. Morey, Albert Road kiln, Southsea.	„ „	Employing boy under 10 years of age in a brick yard.	- -	0 14 6	Case dismissed. Costs paid by the Crown. The Sub-Inspector swore to having seen the boy at work with coat and boots off, and every usual appearance of being employed. Several of Defendant's men swore he did not work there.
Oct. 23	Austin F. Streeter (executor), saw mills, Romsey.	W. E. Godfrey (mayor) and W. O. Purchase (ex-mayor), Esqs.	Employing a male young person after 2 p.m. on Saturday.	0 10 0	1 1 0	
			Informations laid by Mr. Godfrey-Faussett.			
June 19	Messrs. Colthurst and Symons, brick manufacturers, Burnham, Somerset.	R. A. Kinglake, Esq., J. Cox, Esq., Gen. G. B. Munbee, Lt.-Col. H. W. Rawlins, and C. B. Wilkins, Esq., Weston-super-Mare.	Employing a child more than 6½ hours - -	- -	0 12 10	Withdrawn on payment of costs by Defendant.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Godfrey-Faussett*-cont.	£ s. d.	£ s. d.	
June 19	Messrs. Colthurst and Symons, brick manufacturers, Burnham, Somerset.	R. A. Kinglake, Esq., J. Cox, Esq., Gen. G. B. Munbee, Lt.-Col. H. W. Rawlins, and C. B. Wilkins, Esq., Weston-super-Mare.	Employing a child without having procured a certificate of school attendance.	- -	0 10 10	Withdrawn on payment of costs by Defendant.
,,	Samuel Newick, parent of child employed by above firm.	,, ,,	Not causing his son to attend school - -	- -	0 15 4	Withdrawn on payment of costs by Defendant.
			Informations laid by Mr. Blenkinsopp.			
,, 12	Alfred Simms, soda water manufacturer, Walsall.	S. Stephens, H. Highway, and H. Brace, Esqs., Guildhall, Walsall.	Employing a child after 4 p.m. on Saturday -	0 10 0	0 11 0	
,,	,, ,,	,, ,,	Failing to produce school certificate for said child	- -	0 6 6	Withdrawn on payment of costs by Defendant.
,,	,, ,,	,, ,,	Employing a young person after 4 p.m. on Saturday	- -	0 6 6	Withdrawn on payment of costs by Defendant.
,,	,, ,,	,, ,,	Employing a young person after 4 p.m. on Saturday	- -	0 6 6	Withdrawn on payment of costs by Defendant.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
June 12	Harris Davis, clothier, Walsall.	S. Stephens, H. Highway, and H. Brace, Esqs., Guildhall, Walsall.	Employing a young person for more than 12 hours in a day.	- -	- -	Dismissed, on ground that, though the boy might be 14 hours in the workshop, it did not follow that he was engaged all the time in a handicraft. Another proof of the absurdity of the Workshop Act as it stands at present.
„ 23	Grazebrook and Aston, colliery owners and county magistrates, Tipton.	T. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Employing a girl of 10 in making bricks - -	- -	- -	Defendants' counsel argued that Defendants were not liable. Two men "got up" the bricks at so much per thousand, and employed the hands. I maintained that these men were only servants, and not occupiers. They paid no rent and no rates, and could not make bricks for any one except the owners. Adjourned.
„	„ „	„ „	Employing a girl of 11 in making bricks - -			
„	John Heath, Coppice Brickworks, Seabrook, Tipton.	„ „	Employing a child of 12 in making bricks - -	2 0 0	0 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
June 23	John Heath, Coppice Brickworks, Seabrook, Tipton.	T. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Employing a child of 13 in making bricks - -	2 0 0	0 9 6	
"	" "	" "	Employing a child of 14 in making bricks - -	2 0 0	0 9 6	
July 7	Grazebrook and Aston, colliery owners and county magistrates, Tipton.	" "	Employing a girl of 10 in making bricks - -	- -	0 9 6	Magistrate decided (adjourned from June 23rd)— 1. That Defendants were the occupiers; 2. That under Workshop Act liability of occupier could not be transferred to servant, "but as a "reasonable doubt "had arisen, he "supposed I would "be content with "costs."
"	" "	" "	Employing a girl of 11 in making bricks - -	- -	0 9 6	
" 21	John Orton, file maker, Darlaston.	" "	Failing to produce a school certificate - -	1 0 0	0 12 0	
"	Thos. Whistance, lock filer, Darlaston.	" "	Parent. Neglecting to send his child to school -	0 5 0	0 12 0	
"	Joseph Meredith, nut maker, Darlaston.	" "	Failing to produce a school certificate - -	1 0 0	0 12 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
July 21	James Stokes, nut maker, Darlaston.	T. Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Failing to produce a school certificate - -	1 0 0	0 12 0	
"	Benj. Haden, nut maker, Darlaston.	" "	Failing to produce a school certificate - -	1 0 0	0 12 0	
"	Wm. Turner, fitting maker, Wednesbury.	" "	Failing to produce a school certificate - -	- -	0 12 0	In this case the child had been attending school, so no penalty was asked for, Defendant paying the costs.
			Informations laid by Mr. Johnston.			
May 1	Wm. Morris, osier peeler, King's Heath.	Rev. F. T. Swinburn, Thomas Lane, Samuel Thornton, Esqs., and others, King's Heath.	Employing a male child for more than 6½ hours on 17th April.	0 10 0	0 10 6	The Bench inflicted a heavier penalty in this case, the child being only 6 years old.
"	" "	" "	Employing four others in like manner - -	0 10 0	1 14 0	
"	Henry Moseley, King's Heath.	" "	Wilfully failing to cause his child employed as above to attend school.	- -	0 4 6	
"	Thomas Clark, King's Heath.	" "	Similar offence - - - - -	- -	0 4 6	
"	Wm. Basset, King's Heath.	" "	Similar offence - - - -	- -	0 4 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
May 1	George Reeves, King's Heath.	Rev. F. T. Swinburn, Thomas Lane, Samuel Thornton, Esqs., and others, King's Heath.	Wilfully failing to cause his child employed as above to attend school.	- -	0 4 6	
"	Wm. Hodgkiss, Moor Green.	" "	Similar offence - - - -	- -	0 4 6	
" 15	Wm. Skidmore, hair pin manufacturer, Barford Street.	George Goodrick and Charles Sturge, Esqs., Birmingham.	Employing Sophia Richardson, a child, for more than 6½ hours on 20th May.	0 2 6	0 12 6	
"	George Richardson, boot maker, Barford Street.	" "	Suffering his child to be employed as above - -	0 2 6	0 12 6	
June 12	George Stephens, bootlace manufacturer, Balsall Heath.	Saml. Thornton, Fredk. Elkington, and Thos. Stock, Esqs., Balsall Heath.	Employing Annie Lawford, a child, for more than 6½ hours on 4th June.	0 10 0	0 13 6	
"	John Bond, brick manufacturer, Garrison Lane.	Charles Sturge and Geo. Goodrick, Esqs., Birmingham.	Employing three male children under the age of 10 in the manufacture of bricks on 3rd June.	6 0 0	1 17 6	
"	Henry Savage, brick moulder, Keelyng Street.	" "	Suffering his child to be employed as above - -	0 10 0	- -	Without costs; 12*s.* 6*d.*
"	George Savage, brick manufacturer, Garrison Lane.	" "	Employing Arthur Evans, a child under the age of 10 years, in the manufacture of bricks on 3rd June.	1 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
June 26	Horace W. Howe, dressmaker, New Street.	J. D. Goodman and A. Hill, Esqs., Birmingham.	Employing Fanny Hill, a woman, after 4 p.m. on Saturday, June 13th, in a handicraft.	1 0 0	0 12 6	
"	" "	" "	Employing the same woman for more than 12 hours on 27th May.	1 0 0	0 12 6	
"	" "	" "	Employing four other women after 4 p.m. on Saturday, June 13th.	4 0 0	2 10 0	
"	" "	" "	Employing Louisa Cox in like manner on June 6th	1 0 0	0 12 6	
"	" "	" "	Employing Louisa Cox in like manner on June 13th	1 0 0	0 12 6	
"	" "	" "	Employing Alice Taylor in like manner on June 13th.	1 0 0	0 12 6	
"	" "	" "	Employing Alice Taylor for more than 12 hours on 27th May.	1 0 0	0 12 6	
"	" "	" "	Employing Mary Ann Fawke and Harriet Wright after 4 p.m. on Saturday, June 13th.	2 0 0	1 5 0	
"	" "	" "	Employing Emma Varley in like manner on June 6th.	1 0 0	0 12 6	
"	" "	" "	Employing Emma Varley in like manner on June 13th.	1 0 0	0 12 6	
"	William Kentish, milliner, High Street.	" "	Employing four women and one female young person after 4 p.m. on Saturday, June 13th.	10 0 0	3 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
June 26	Henry Farmer, fender fitter, Hick Street.	J. D. Goodman and A. Hill, Esqs., Birmingham.	Suffering his child to be employed for more than 6½ hours on 16th June.	0 10 0	- -	Without costs; 12*s.* 6*d.*
„	Fredk. Hidson, rule maker, Leopold Street.	„ „	Suffering his son, David Hidson, a young person, to be employed for more than 12 hours on 12th June.	0 5 0	0 12 6	
July 10	Fredk. Gardner, Hick Street.	J. D. Goodman and Chas. Sturge, Esqs., Birmingham.	Suffering his child, Herbert Gardner, to be employed for more than 6½ hours on 17th June.	0 10 0	- -	Without costs.
„ 24	Susannah Gwyther and Caroline Webster, dressmakers, Jamaica Row.	Alderman Manton, Chas. Sturge, and Thomas Lloyd, Esqs., Birmingham.	Employing a woman and a female young person after 4 p.m. on Saturday the 11th July.	0 10 0	1 5 0	
„	„ „	„ „	Similar offence on 18th July - - -	0 10 0	1 5 0	
„ 31	Edward Church, dressmaker, Horsefair.	George Goodrick and J. D. Goodman, Esqs., Birmingham.	Employing four women after 4 p.m. on Saturday, 4th July.	4 0 0	2 10 0	
Oct. 30	John Adams, tube drawer, Moseley Road.	Chas. Sturge and J. D. Goodman, Esqs., Birmingham.	Wilfully failing to cause his child to attend school, during the week ending on Saturday, October 17th.	0 1 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp.*	£ s. d.	£ s. d.	
May 11	Ann Lloyd, Orlands rope works, Bolton.	William Makant, Thomas Walmsley, Wm. Walter Cannon, and Thomas Hesketh, Esqs., Bolton Town Hall.	Employing a child under the age of 8 years - -	0 5 0	0 13 0	
"	Lawrence Queenan, 13, Moss Street, Bolton.	" "	Neglecting to cause his child to attend school -	0 2 6	0 14 0	
" 18	James Gillon, 6, Bradshaw Street, Bolton.	John Green, George Fell, and Charles Taylor, Esqs., Bolton Town Hall.	Allowing his son, a child under the age of 8 years, to be employed in a rope walk.	0 1 0	0 17 0	
June 13	Robert Gowanlock, brickmaker, 110, Hampden Street, Bolton.	Thomas Hesketh and Charles Taylor, Esqs., Bolton Town Hall.	Employing a boy under the age of 10 years in brickworks.	0 10 0	0 14 6	
Sept. 10	Francis Holden, Albion bobbin works, Clitheroe.	John Mitchell, Esq., J.P., Thomas Bulcock, Esq., J.P., R. B. Dewhurst, Esq., J.P., and Thomas Whittaker, Esq., J.P., Clitheroe Petty Sessions.	Employing a child without a certificate of his attendance at school.	0 1 0	0 16 0	
"	Thomas Coulthurst (parent), stonemason, Hyde Square, Clitheroe.	" "	Neglecting to cause his child to attend school -	0 2 6	0 13 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold.*	£ s. d.	£ s. d.	
June 27	Paling and Co., milliners and dressmakers, Oldham Street, Manchester.	J. A. Railton and J. Rickards, Esqs., City Police Court, Manchester.	Employing a female after 9 p.m. - - -	1 0 0	0 11 0	
July 1	James Hammond, fancy box maker, Macclesfield.	The Mayor and D. Clark, Esq.	Employing a child for more than 6½ hours in the day.	0 5 0	0 10 6	
„ 16	W. Scholefield, brickmaker, Newton, Manchester.	Dr. Reilly and J. Clarke Kennedy, Esqs., Strangeways, Manchester.	Employing a girl under 16 in a brickfield - -	0 5 0	0 12 6	
Oct. 26	Richard Evans, salt proprietor and brickmaker, Winsford.	Major France-Hayhurst and W. R. Court, Esq., Middlewich.	Employing a child without a certificate of school attendance.	- -	1 6 0	These being the first workshop cases in this place, costs only were imposed.
„	Abraham Hitchen, blacksmith, Winsford.	„ „	Neglecting to cause his child to attend school -	- -	0 9 0	
„ 27	Henry Ray, brickmaker, Nantwich.	Rev. W. Follcott, and Wilbraham Tollemache, Esq., M.P.	Employing a child for more than 6½ hours in the day.	0 5 0	0 9 0	
„ 28	James Ludlow, brick burner, Stockport.	The Mayor, J. Bailey, and W. Shaw, Esqs.	Conniving at the illegal employment of his child under 10.	0 10 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Striedinger.*	£ s. d.	£ s. d.	
May 28	Sarah Moreton, Nuneaton	G. J. Sale and R. Ramsden, Esqs., County Petty Sessions, Nuneaton.	1. Not causing her child, aged 10 years, to attend school.	0 2 6	0 16 6	Defendant being a poor widow, with a large family of small children, the Bench and prosecutor agreed that the fine alone was a sufficiently severe punishment; prosecutor therefore paid the costs.
,,	,, ,,	,, ,,	2. Permitting the employment of the same child for a longer period than 6½ hours per diem in a brickfield.			
,, 29	John Dale, brickmaker, Stratford-on-Avon.	J. C. Jones and A. Crowdy, Esqs., County Petty Sessions, Stratford-on-Avon.	1 and 2. Employing two children, respectively 10 and 12 years of age, for a longer period than 6½ hours per diem in a brickyard.	0 5 0	1 10 6	Prosecutor, having obtained a conviction on the first charge, withdrew the remaining three; Defendant, who is a very poor man, paying all the costs, and promising to carry out the provisions of the Workshop Regulation Act in future.
,,	,, ,,	,, ,,	3 and 4. Not producing a school certificate for the same two children.			
,,	John Hughes, farm labourer, Stratford-on-Avon.	,, ,,	1. Permitting the employment of his child, aged 10, in a brickyard, for a longer period than 6½ hours per diem.	0 1 0	0 17 6	The Defendants in these two cases being both extremely poor and ignorant, prosecutor considered himself justified, at their earnest supplication, in
,,	,, ,,	,, ,,	2. Neglecting to cause his child to attend school -			

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Striedinger*—cont.	£ s. d.	£ s. d.	
May 29	Thomas Johnson, day abourer, Stratford-on-Avon.	J. C. Jones and A. Crowdy, Esqs., County Petty Sessions, Stratford-on-Avon,	1. Permitting the employment of his child, aged 12, in a brickyard, for a longer period than 6½ hours per diem.	0 1 0	0 17 6	not only withdrawing the second charges, but in throwing the legal expenses (which were disproportionately heavy) upon the Crown.
,,	,, ,,	,, ,,	2. Neglecting to cause his child to attend school			
June 15	Richard Potter, rope maker, Henley-on-Thames.	G. Penlin and W. Plumtre, Esqs., Borough Petty Sessions, Henley-on-Thames.	1. Employing a child of 10 years of age for a longer period than 10½ hours per diem.			
,,	,, ,,	,, ,,	2. Employing the same child on Saturdays after 4 p.m.	0 3 0	1 2 0	
,,	,, ,,	,, ,,	3. Not producing a school certificate for the same child.			
Aug. 28	William Gudderidge, brickmaker, Amington.	G. Skey and T. E. Price, Esqs., County Petty Sessions, Tamworth.	Not causing his child, while employed in a workshop, to attend a school.	0 10 0	0 11 0	
Sept. 24	Richard Boswell, brickmaker, Neithrop.	Rev. C. F. Wyatt, H. Norris and T. R. Cobb, Esqs., County Petty Sessions, Banbury.	1. Employing a female under 16 years of age in a brickyard on 6th August.	1 10 0	0 13 0	
,,	,, ,,	,, ,,	2. Repeating the same offence on 26th August			

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Striedinger*—cont.	£ s. d.	£ s. d.	
Sept. 24	Daniel Boswell, brick moulder, Neithrop.	Rev. C. F. Wyatt, H. Norris and T. R. Cobb, Esqs., County Petty Sessions, Banbury.	Employing a female under 16 years of age in a brickyard.	-	0 6 0	There were two moulders of the name of Daniel Boswell employed in the same brickyard. The summons had been served on the wrong one, and was accordingly dismissed. The Crown had to pay the costs and prosecutor to take out a new summons.
Oct. 8	„ „	A. R. Thorney, Esq., and Major Goddard, County Petty Sessions, Banbury.	Employing a female under 16 years of age in a brickyard.	0 5 0	0 11 0	
			Informations laid by Mr. Bowling.			
May 8	Thos. Cook, braces maker, Regent Parade.	J. D. Goodman and G. Goodrick, Esqs.	Employing a young person after 9 at night -	1 0 0	0 12 6	Visited at 9.17 p.m. Work had commenced at 8 a.m.
„	„ „	„ „	Employing a child after 8 at night - - -	1 0 0	0 12 6	
„	„ „	„ „	Same offence in another case - - - - -	1 0 0	0 12 6	
„	Robert Edge, coal dealer, Regent Row.	„ „	Father of above young person; allowing her to be illegally employed.	0 5 0	0 12 6	
June 26	Charles Williams, caster, Price Street.	J. D. Goodman and A. Hill, Esqs.	Not causing his child to attend school - -	0 5 0	0 7 6	False certificates given.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
July 17	George Passmore - -	J. D. Goodman and C. Sturge, Esqs.	Not causing his child to attend school - -	0 5 0	0 12 6	
Oct. 29	Henry Crisp, Wheeler Street.	C. Sturge, T. S. Wright, and T. Lloyd, Esqs.	Not causing his child to attend school - -	0 5 0	0 12 6	
„	Richard Wood, Caroline Street.	„ „	Employing a young person after 9 at night -	0 2 6	0 12 6	
„	„ „	„ „	Employing a woman after 9 at night - -	- -	0 6 6	Withdrawn on payment of costs.
„	„ „	„ „	Same offence in a second case - - -	- -	0 6 6	Withdrawn on payment of costs.
„	James Coggins, Caroline Street.	„ „	Employing a woman after 9 at night - - -	0 10 0	0 10 0	
June 19	Edward Lovell, Cecil Street.	C. Sturge and G. Goodrick, Esqs.	Not causing his child to attend school - -	- -	- -	The Defendant was under arrest on a charge of forgery, and the summons was not served.
			Informations laid by Mr. Meade-King.			
May 6	Ann Collinge, dressmaker, 179, York Street, Stratford Road.	Charles H. Rickards and Joseph A. Railton, Esqs., City Police Court, Manchester.	Employing a child after 4 o'clock on Saturday afternoon.	1 0 0	0 11 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
May 6	Ann Collinge, dressmaker, 179, York Street, Stratford Road.	Charles H. Rickards and Joseph A. Railton, Esqs., City Police Court, Manchester.	Employing same child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
"	" "	" "	Employing a young person after 4 o'clock on Saturday afternoon.	- -	0 9 0	Withdrawn on payment of costs.
Sept. 16	Wm. Sermon and Sons, brick makers, Clayton.	John Ross Coulthart and Samuel Duncroft Lees, Esqs., Ashton-under-Lyne.	Employing a female under the age of 16 years in the manufacture of bricks.	1 10 0	0 12 6	This girl was under the age of 13 years.
"	" "	" "	Employing a female under the age of 16 years in the manufacture of bricks.	1 0 0	0 12 6	
" 17	James Berry, brick maker, Openshaw.	Sir John Iles Mantell, Stipendiary Magistrate, County Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 19 6	
"	" "	" "	Employing a child for a period of more than 6½ hours in one day.	0	0 10 6	
" 30	Matthew Broadhead, skirt manufacturer, Park Street, Tipping Street.	Charles H. Rickards and Charles Leigh Clare, Esqs., City Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	2 0 0	0 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cooke-Taylor.*	£ s. d.	£ s. d.	
June 5	John Christian, brickmaker, Preston.	J. J. Myres (mayor) and R. Pedder, Esqs.	Employing a child over 6½ hours in one day	0 2 6	0 10 6	
„	James Robinson (parent)	„ „	Allowing his child to be employed for over 6½ hours in one day.	0 2 6	0 8 0	
„	Wm. Duckworth, brickmaker, Preston.	„ „	Employing two children over 6½ hours in one day	0 5 0	1 0 0	
„	Thos. Hall (parent)	„ „	Allowing two of his children to be employed over 6½ hours in one day.	0 5 0	0 10 6	
„	Wm. Starkie (parent)	„ „	Allowing his child to be employed over 6½ hours in one day.	- -	0 5 0	Case dismissed. The man, who was employer as well as parent, swore he had never employed the child at all, and the magistrates believed him.
Aug. 11	Henry Leaver, brickmaker, Winmarleigh.	R. Pedder and J. Satterthwaite, Esqs.	Allowing his child to work over 6½ hours in one day	1 0 0	0 13 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Jones.*	£ s. d.	£ s. d.	
May 12	G. and T. Davis, tile manufacturers, Broseley.	C. L. Biggs and W. L. Lowndes, Esqs., Ironbridge.	For employing a child without school certificate -	0 5 0		
„	„ „	„ „	For employing a child without school certificate -	0 5 0		
„	„ „	„ „	For employing a child without school certificate -	0 5 0	1 9 0	
„	„ „	„ „	For employing a child without school certificate -	0 5 0		
„	„ „	„ „	For employing a child without school certificate -	0 5 0		
„	„ „	„ „	For employing a child without school certificate -	0 5 0		
„	Samuel Pinner, Broseley -	„ „	For not causing his child to attend school - -	-	0 7 6	To pay costs only, having pleaded illness during his son's employment.
„	Thos. Lane, Broseley -	„ „	For not causing his child to attend school - -	0 1 0	0 10 0	
„	Edwin Shaw, Broseley -	„ „	For not causing his child to attend school - -	0 1 0	0 10 0	
„	Thos. Chadwick, Broseley	„ „	For not causing his child to attend school - -	0 1 0	0 10 0	
„	James Hall, Broseley -	„ „	For not causing his child to attend school - -	0 1 0	0 10 0	
„	Thos. Evans, Broseley -	„ „	For not causing his child to attend school - -	0 1 0	0 10 0	
„ 15	William Hodgkiss, chain maker, The Hayes.	R. L. Freer and J. B. Cockrane, Esqs., Town Hall, Stourbridge.	For employing a child without school certificate -	1 0 0	0 10 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Jones*—cont.	£ s. d.	£ s. d.	
May 15	David Leedham, The Lye	R. L. Freer and J. B. Cockrane, Esqs., Town Hall, Stourbridge.	For not causing his child to attend school -	0 1 0	0 8 0	
Aug. 24	Joseph Lavender, nailer, Netherton.	William Wilkinson, Esq., mayor, and Chas. Cockrane, Esq., Town Hall, Dudley.	For employing a child without school certificate -	0 1 0	0 7 0	
„	John Grainger, nailer, Netherton.	„ „	For employing a child without school certificate -	0 1 0	0 10 6	
„	Zarah Price, Netherton -	„ „	For not causing his child to attend school -	0 1 0	0 10 0	
„ 28	John Raybould, chain maker, Cradley.	B. Littlewood, Esq., and Colonel Burrows, Town Hall, Stourbridge.	For employing a child for more than 6½ hours -	- -	0 10 0	Dismissed, owing to child contradicting in court her former statement.
„	Benj. Boxley, chain maker, Cradley.	„ „	For employing a child for more than 6½ hours -	0 2 6	0 10 6	
Sept. 21	William Williams, Mersey Hill, Dudley.	The Mayor, and Charles Cockrane and Jno. Aston, Esqs., Town Hall, Dudley.	For allowing his daughter, being under 16, to be employed in a brickyard.	0 2 6	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Jones*—cont.	£ s. d.	£ s. d.	
Sept. 21	John Hughes, brickmaker, Dudley Wood, Dudley.	The Mayor, and Charles Cockrane and Jno. Aston, Esqs., Town Hall, Dudley.	For employing a girl under 16 in a brickyard -	- - -	0 6 6	Dismissed, although the father was fined for allowing his girl to be employed, and the Defendant acknowledged the offence. The magistrates, judged that all due precaution had been used, because the Defendant said he questioned the girl about her age, receiving the reply, "I'm old enough." This the girl denied at first, but being pressed by the magistrates, said such a conversation might have taken place.
Oct. 28	Joseph Cook Keys, Frederick Street, Wednesfield Heath.	John Hartley and G. L. Underhill, Esqs.	For employing a boy without school certificate -	1 0 0	0 9 6	
"	" "	" "	For employing a boy without school certificate -	1 0 0	0 9 6	
	Wm. Davis, Wednesfield Heath.	" "	For not causing his son to attend school - -	0 10 0	0 12 0	
"	James Haycock, Wednesfield Heath.	" "	For not causing his son to attend school - -	0 2 6	0 12 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond.*	£ s. d.	£ s. d.	
June 25	Elias Ranicar, draper, Wigan.	W. Roocroft and R. Hilton, Esqs., Wigan.	Employing three women at 10.30 p.m. on Saturday in millinery.	0 15 0	1 5 6	
„	Zachariah Hubbert, draper, Wigan.	„ „	Employing five women and girls at 10.5 p.m. on Saturday in millinery.	1 5 0	2 2 6	
„	James Entwistle, draper, Wigan.	„ „	Employing three girls in millinery at 10.10 p.m. on Saturday.	0 15 0	5 6	
„	John Jackson, draper, Wigan.	„ „	Employing four girls in millinery at 10.20 p.m. on Saturday.	1 0 0	1 1 0	
„ 29	James Harrison, brickmaker, St. Helen's.	R. Daglish and W. L. Evans, Esqs., St. Helen's.	Employing two children in a brickfield without school certificates.	0 10 0	0 13 0	
„	Peter Bradbury, collier, St. Helen's.	„ „	Allowing his son to be employed in a brickfield without attending school.	0 5 0	6 6	
„	George Clare, beerhouse keeper, St. Helen's.	„ „	Allowing his son to be employed in a brickfield without attending school.	0 5 0	0 6 6	
July 3	Thomas Boardman, brickmaker, Wigan.	John Cross and A. C. Smethurst, Esqs., Wigan.	Employing a child in a brickfield without school certificates.	0 10 0	0 11 0	
„	Thomas Cowburn, brickmaker, Hindley, near Wigan.	„ „	Employing two children, without school certificates, in a brickfield.	0 10 0	1 2 0	
„	Samuel Butler - -	„ „	Allowing his son to be employed in a brickfield without attending school.	0 5 0	0 11 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
July 20	Thomas White, brickmaker, Runcorn.	Sir Richard Brooke and Wm. Wright, Esq., Runcorn, Cheshire.	Employing two children in a brickfield without school certificates.	0 10 0	1 9 0	
„	William Statham, brickmaker, Runcorn.	„ „	Employing a child in a brickfield without school certificates.	0 5 0	0 14 0	
„ 23	Thomas Moorfield, brickmaker, Wigan.	W. J. Lamb and R. Burland, Esqs., Wigan.	Employing a child in a brickfield without school certificates.	0 10 0	0 8 6	
„	William Moorfield, brickmaker, Wigan.	„ „	Employing a child in a brickfield without school certificates.	0 10 0	0 8 6	
Aug. 7	Rd. Taylor, brickmaker, Skelmersdale.	Dr. Ashton and Major Webb, Ormskirk.	Employing a child in a brickfield without school certificates.	0 5 0	0 17 0	
„	Rd. Berry, brickmaker, Skelmersdale.	„ „	Employing a child in a brickfield without school certificates.	- -	0 10 0	Withdrawn on payment of costs by the Defendant.
„	Michael Moran, Ormskirk	„ „	Allowing his son to be employed in a brickfield without attending school.	- -	0 9 0	Withdrawn on payment of costs by Defendant.
„	Patrick Moran, Ormskirk	„ „	Allowing his son to be employed in a brickfield without attending school.	- -	0 9 0	Withdrawn on payment of costs by Defendant.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
Aug. 29	Edward Jones, brickmaker, Liverpool.	A. Castellain and F. Hollins, Esqs., Basnett Street Court, Liverpool.	Employing a child in a brickfield without school certificates.	- -	0 9 3	Dismissed on a technical objection raised by the solicitor for the defence. The magistrates refused a certificate of dismissal in order that I might re-summon Mr. Jones. The Defendant was re-summoned on Oct. 13th, and a conviction obtained. *Vide* below. Costs paid by the Crown.
"	Isaac Denton, brickmaker, Liverpool.	" "	Employing two children in a brickfield without school certificates.	- -	1 6 0	The same technical objection applied to this case, but the solicitor for the defence offered to waive it, since he could not obtain a certificate of dismissal. The magistrates however adjourned it, allowing costs to the Defendant for advocate and witnesses. *Vide* below.
" 31	" "	Lt.-Colonel Trimble and G. Preston, Esqs., Basnett Street Court, Liverpool.	Employing two children, without school certificates, in a brickfield.	0 11 0	1 17 6	Adjourned from August 29th.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
Oct. 13	Edward Jones, brickmaker, Liverpool.	G. W. Moss and C. Langton, Esqs., Basnett Street Court, Liverpool.	Employing a child, without school certificates, in a brickfield.	0 10 0	1 1 6	The same offence as that heard on August 29th.
"	" "	" "	Employing a girl under 16 years of age in a brickfield.	0 10 0	0 18 0	
" 16	John Williams, brickmaker, Liverpool.	R. Neilson and F. Hollins, Esqs., Woolton Petty Sessions.	Employing a child in a brickfield without school certificates.	0 5 0	1 2 8	
"	Owen Elias, brickmaker, Liverpool.	" "	Employing a child in a brickfield without school certificates.	0 5 0	1 3 0	
"	Roberts and Robinson, brickmakers, Liverpool.	" "	Employing two children in a brickfield without school certificates.	0 10 0	2 5 0	
			Informations laid by Mr. Hoare.			
May 7	Wm. Knowles, lock furniture, New Sumner Street, Birmingham.	Jos. Chamberlain and D. Goodrick, Esqs., Public Offices, Birmingham.	Employing a child for more than 6½ hours on the 2nd April.	1 0 0	1 5 0	
June 3	Rd. Humphreys, mineral water maker, Yates Street, Aston.	Colonel Radcliffe and E. Boughton, Esq., Police Court, Erdington, Warwick.	Employing a young person on Sunday the 17th May.	0 10 0	0 15 6	
"	" "	" "	Employing a child on the same day - -	0 10 0	0 15 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
June 3	John Waldron, gun implement forging, Lichfield Road.	Colonel Radcliffe and E. Boughton, Esq., Police Court, Erdington, Warwick.	Employing a child for more than 6½ hours - -	- -	0 9 0	Defendant paying the costs.
"	Josiah Whitehouse, Victoria Road, Aston.	" "	Consenting to the above offence - - -	0 2 0	0 13 6	In this case the Defendant having a large family, the fine only was imposed.
Sept. 2	Kershaw Bros., string sorters, Turner Street, Manchester.	F. J. Headlam Esq., Stipendiary, City Police Court, Manchester.	Employing two children more than 6½ hours -	2 0 0	1 3 0	
"	" "	" "	Similar offence - - - - -	- -	0 9 0	Withdrawn on Defendant paying costs.
" 11	Geo. Warmisher, brickmaker, Fairy Lane, Manchester.	" "	Employing a female under 14 years of age in a brickfield.	1 0 0	0 11 6	
"	Geo. Yates, brick moulder	" "	Sanctioning the above employment of his daughter	0 5 0	0 11 6	
" 27	John Sankey, Blackley -	Sir John I. Mantell, Esq., Stipendiary, County Police Court, Manchester.	Employing a child for more than 6½ hours on 2nd October.	1 0 0	0 17 0	
"	Thos. Whitehead, Moston Lane, Blackley.	" "	Failing to cause his child to attend school - -	0 1 0	0 5 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer.*	£ s. d.	£ s. d.	
Feb. 17	Joshua Liddell, The Barracks, Catshill.	Capt. Bourne, R. Smallwood and W. E. Everett, Esqs.	For falsely pretending to be a Sub-Inspector of factories.	- -	- -	Committed for trial at Worcester adjourned Quarter Sessions, 23rd February.
„ 23	„ „	Graham Hastings, Esq., Vice-Chairman Quarter Sessions.	Indicted for above - - - -	- -	- -	Grand jury ignored the bill.
Mar. 3	„ „	Capt. Bourne and R. Smallwood, Esq.	For falsely pretending to be a Sub-Inspector of factories. Re-committed, and this time for the Assizes.	—	—	
„ 9	„ „	Lord Chief Justice Coleridge.	Indicted for above - - - - -	- -	- -	Guilty; seven days hard labour.
April 2	Elijah Raybould, The Coppice, Saltwells, King Swinford.	Isaac Spooner, Esq., Stipendiary.	As occupier, for permitting a child under 8 years of age to be employed.	- -	0 7 0	I did not press for a penalty as the Defendant was not a wilful transgressor.
„	Eli Raybould - -	„ „	Father, for employing his son under 8 years of age	- -	0 7 0	I did not ask for a penalty. Not a regular custom.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
April 23	Eli Dunn, Maugham Street, Quarry Bank.	Isaac Spooner, Esq., Stipendiary.	Neglecting to send his child to school - -	1 0 0	0 14 6	Sent boy at nights. Used to send his boy by day, but got a loophole, and got false certificates from the master. The latter would have been prosecuted but for age and ill health.
May 28	Thomas Guest, Vine Street, Quarry Bank.	H. O. Firmstone and H. Smith, Esqs.	Employing his child and neglecting to send her to school.	0 5 0	0 15 6	Defendant failed to appear on first occasion. Warrant issued.
June 9	Thomas Moore, Hasbury, Halesowen.	F. Lea Smith and H. Howard, Esqs.	For employing a child more than 6½ hours - -	0 2 6	0 10 6	Bad case. Women and girls employed in large heavy nail (spikes) making, only fit work for men.
,,	,, ,,	,, ,,	For employing a child more than 6½ hours - -	0 2 6	0 10 6	
,,	,, ,,	,, ,,	For employing a child more than 6½ hours - -	0 2 6	0 10 6	
,,	,, ,,	,, ,,	For failing to produce school certificate of a child employed in his workshop.	0 10 0	0 10 6	
,,	,, ,,	,, ,,	For failing to produce school certificate of a child employed in his workshop.	0 10 0	0 10 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
June 9	Thomas Moore, Hasbury, Halesowen.	F. Lea Smith and H. Howard, Esqs.	For failing to produce school certificate of a child employed in his workshop.	0 10 0	0 10 6	
„	John James, Bromsgrove Street, Halesowen.	„ „	For neglecting to cause his daughter to attend school.	- -	- - 6	Did not ask for penalty. Considered fine in the two cases sufficient.
„	„ „	„ „	For permitting her to work more than 6½ hours	- -	- 0 6 6	
„	William Farley, Wall Well, Halesowen.	„ „	For neglecting to cause his daughter to attend school.	- -	- 0 6 6	Did not ask for penalty. Considered fine in the two cases sufficient.
„	„ „	„ „	For permitting her to work more than 6½ hours	- -	- 0 6 6	
„	Francis Allen, Hasbury, Halesowen.	„ „	For neglecting to cause his child to attend school	- -	- 0 6 6	Did not ask for penalty. Considered fine in the two cases sufficient.
„	„ „	„ „	For permitting his child to work more than 6½ hours	- -	- 0 6 6	
„ 16	Thomas Norris, Mill Fields, Bromsgrove.	Capt. Bourne, R. Smallwood and A. Rylands, Esqs.	Neglecting to send his child to school	0 1 0	0 8 0	Did not press.
„	George Norris, The Rock, Bromsgrove.	„ „	Neglecting to send his child to school	- -	- 0 5 6	I withdrew this on payment of costs by Defendant as he had been in difficulties.
July 7	William Etheridge, Hawn Villas, Halesowen.	F. Lea Smith and H. Howard, Esqs.	For neglecting to cause his daughter to attend school.	1 0 0	0 12 6	Magistrates said they saw paltry fines did no good, so they were determined to put a stop to the infringement of the law.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Aug. 7	Allen Beasley, Coley Gate, Cradley.	Colonel Fletcher, C. P. Noel, Esq., and Hon. C. G. Lyttelton.	Failing to produce certificate of child employed in his workshop.	0 1 0	0 11 0	
"	" "	" "	For employing a boy under 13 and failing to produce school certificate.	0 1 0	0 11 0	
"	" "	" "	For employing a boy under 13 and failing to produce school certificate.	0 1 0	0 11 0	
"	Joseph Harper, Coley Gate, Cradley.	" "	For neglecting to cause his boy to attend school, though employed in Allen Beasley's shop.	0 1 0	0 9 0	
"	Thomas Beasley, Cradley	" "	For neglecting to cause his boy to attend school, though employed in Allen Beasley's shop.	0 1 0	0 9 0	
"	David Taylor, Coley Gate, Cradley.	" "	For neglecting to cause his boy to attend school, though employed in Allen Beasley's shop.	0 1 0	0 9 0	
"	Samuel Kurton, Two Gates, Cradley.	" "	For neglecting to cause his boy to attend school, though employed in Allen Beasley's shop.	0 2 6	0 9 0	Second offence. Ought to have had full penalty, as his was bad case.
"	Evan Robinson, High Town, Cradley.	" "	Neglecting to cause his child employed in his own shop to attend school.	0 1 0	0 8 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Aug. 10	Elijah Guest, New Village, Dudley Wood.	W. Wilkinson (mayor), J. Aston, and C. Cochrane, Esqs.	For neglecting to cause his child Ryland to attend school.	0 5 0	0 17 0	Costs heavy, as Defendant set up on the first hearing a frivolous defence, and case had to be adjourned for attendance of schoolmistress.
"	" "	" "	Same for his son William - - - -	0 5 0	0 13 6	
" 24	Ryland Guest, New Village, Dudley Wood.	" "	Making use of false school certificates - -	- -	0 9 0	Withdrawn on payment of costs by the father, as the Inspector, Mr. Baker, thought it not desirable to send so young a boy to prison.
"	Benj. Sidaway, Bowling Green, Dudley Wood.	" "	Neglecting to cause his son to attend school -	-	0 9 0	Costs sufficient to meet this case.
"	William Darly, Hadley's Fold, Darly End.	" "	For obstruction - - - -	0 2 6	0 13 0	Refused to give his name, and incited his child to do the same.
"	" "	" "	Neglecting to send his child to school -	0 2 6	0 12 0	
Sept. 9	Henry Heath, Hackett Street, Blackheath.	Colonel Fletcher and Noah Hingley, Esq.	Neglecting to send his daughter to school - -	- -	0 4 6	Costs paid by me. The summons was issued for employing more than 6½ hours by mistake. I was barely prepared to prove such a case.

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Sept. 9	Samuel Johnson, The Flat, Reddall Hill, Old Hill.	Colonel Fletcher and Noah Hingley, Esq.	For employing one Heber Hollies, under 8 years of age.	0 1 0	0 12 1	These costs included 3*s*. 7*d*. allowed for birth certificates. I applied for this to increase the costs, as I find it impossible to get a penalty which is sufficient to restrain offenders. No witness summons.
"	Heber Hollies, The Flat, Reddall Hill, Old Hill.	" "	For permitting his child, under 8 years of age, to be employed in Johnson's shop.	- -	0 4 0	This Defendant escaped to Barrow-on-Furness before service could be effected.
"	William Weaver, Plants Green, Cradley Heath.	" "	Neglecting to send his daughter Ellenor to school	0 1 0	0 16 7	Includes certificate, as in previous case. Witness summons.
Oct. 7	Elizabeth Davis, High Street, Cradley Heath.	C. Cochrane, F. W. G. Barrs, Leecroft Freer, R. L. Freer, and H. Howard, Esqs.	For employing a child, Joseph Billingham, under the age of eight.	0 2 6	0 12 0	Allowed time to pay.

M

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Oct. 7	Mary Billingham, Four Ways, Cradley Heath.	C. Cochrane, F. W. G. Barrs, Leecroft Freer, R. L. Freer, and H. Howard, Esqs.	For obstructing the Sub-Inspector in the execution of his duty by refusing to give her child's name or her own.	- -	0 4 6	This case was fully proved in the opinion of the Bench. The Defendant was to pay the costs if withdrawn, but time was given to pay. Mr. Perry pointed out that the costs could not be recovered unless a fine was inflicted.
„ 2	„ „	„ „	For permitting her child Joseph, under 8 years, to be employed in Elizabeth Davis's shop.	0 1 0	0 10 6	This case also proved in the opinion of the Bench, and in consequence the request for the withdrawal of the former case.
„ 17	John Patrick, Black Waggon Street. Old Hill.	„ „	For neglecting to cause his child to attend school, though employed in the shop.	0 1 0	0 12 0	
„ 16	William Billfield - -	B. Littlewood, Esq., Col. Fletcher, H. O. Firmstone, and J. B. Cochrane, Esqs.	For permitting his daughter Ellen, a girl of 14 years (under), to be employed in the brickyard of Messrs. King Bros.	0 1 0	0 14 1	These costs include 3*s.* 7*d.*, the cost of birth certificate.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Oct. 27	Enoch Kings, Cuckolds Corner, Sidemoor, Bromsgrove.	Capt. Bourne, A. Rylands, Esq., and R. Smallwood, Esq.	Employing his child John, and neglecting to cause him to attend school the required 10 hours.	- -	0 9 6	Withdrawn at my suggestion, on payment of costs by Defendant. Not a bad case, but the boy attended irregularly. Did not ask for costs of birth certificate.
„	Samuel Trott, The Allotments, Sidemoor, Bromsgrove.	„ „	Employing his child Samuel, and neglecting to cause him to attend school the required 10 hours.	0 0 5	0 14 7	This was a bad case, as the boy had not complied with the requirement of 10 hours per week since the 22nd August. 2*s.* 7*d.* allowed for birth certificate in the costs. I deemed 15*s.* sufficient penalty for irregularity out of wages of 1*l.* per week.
			Informations laid by Mr. Maitland.			
June 23	William Ollier, builder, Widnes.	H. S. Hall and A. Fletcher, Esqs., Police Court, Widnes.	Employing a child in a brickfield without certificates of school attendance.	0 5 0	0 6 6	
„	Thomas Leicester, builder, Widnes.	„ „	Employing a child in a brickfield without certificates of school attendance.	0 5 0	0 6 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Maitland*—cont.	£ s. d.	£ s. d.	
June 23	Richard Balshaw, builder, Widnes.	H. S. Hall and A. Fletcher, Esqs., Police Court, Widnes.	Employing a child in a brickfield without certificates of school attendance.	0 5 0	0 6 6	
"	Thos. Butler, builder, Widnes.	" "	Employing a child in a brickfield without certificates of school attendance.	0 5 0	0 6 6	
"	Thomas Sadler, builder, Widnes.	" "	Employing a child, under 10 years of age, in a brickfield.	0 5 0	0 6 6	
"	John Whittle, wire worker, Appleton.	" "	Neglecting to cause his child, employed in a brickfield, to attend school.	0 5 0	0 6 6	
"	Jas. Douglas, well sinker, Widnes.	" "	Neglecting to cause his child, employed in a brickfield, to attend school.	0 5 0	0 6 6	
"	Saml. Platt, joiner, Widnes	" "	Neglecting to cause his child, employed in a brickfield, to attend school.	0 5 0	0 6 6	
"	James Roach, Widnes	" "	Neglecting to cause his child, employed in a brickfield, to attend school.	0 5 0	0 6 6	
"	Thomas Sadler, builder, Widnes.	" "	Employing a girl under 16 years of age in a brickfield.	0 5 0	0 6 0	
July 20	W. H. Ford, builder, Birkenhead.	C. J. Preston, Esq., Stipendiary, Police Court, Birkenhead.	Employing a female under 16 years of age in a brickfield.	- -	0 5 0	Dismissed.
"	" "	" "	Employing a child in a brickfield without certificates of school attendance.	- -	- -	Adjourned, to produce the child.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Maitland*—cont.	£ s. d.	£ s. d.	
July 20	Joseph Jones, builder, Birkenhead.	C. J. Preston, Esq., Stipendiary, Police Court, Birkenhead.	Employing a child in a brickfield without certificates of school attendance.	0 10 0	0 4 0	
„	Duncan Kemp, builder, Birkenhead.	„ „	Employing three children in a brickfield without certificates of school attendance.	1 10 0	0 4 0	
„	Edward Walker, moulder, Birkenhead.	„ „	Neglecting to cause his child, employed in a brickfield, to attend school.	0 1 0	0 1 0	
„	Thomas Barlow, temperer, Birkenhead.	„ „	Neglecting to cause his child, employed in a brickfield, to attend school.	0 1 0	0 1 0	
„	Jas. Reardon, labourer, Birkenhead.	„ „	Neglecting to cause his child, employed in a brickfield, to attend school.	0 1 0	0 1 0	
„ 31	Edward Wordsworth, joiner, Birkenhead.	John Hosack, Esq., Deputy Stipendiary, Police Court, Birkenhead.	Neglecting to cause his child, employed in a brickfield, to attend school.	0 1 0	0 1 0	
Aug. 10	Wm. Trayner, draper, &c., Birkenhead.	„ „	Employing two women after 9 p.m.	0 10 0	1 2 0	
„	Robb Bros., drapers, &c., Birkenhead.	„ „	Employing a woman after 9 p.m.	„	0 4 0	Dismissed.
July 31	W. H. Ford, builder, Birkenhead.	„ „	Employing a child in a brickfield without certificates of school attendance.	„	0 4 0	Dismissed. This was the same child that the parent, Edward Wordsworth, was fined for allowing to work in W. H. Ford's brickfield without attending school.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Maitland*—cont.	£ s. d.	£ s. d.	
Oct. 20	Wm. Longton, Greenhouse, Rainhill.	Sir T. B. Birch, Bart., and W. L. Evans, Esq., Court House, Prescot.	Employing two children in a brickfield without having obtained certificates of school attendance.	2 0 0	1 2 0	
"	Patrick Black, labourer, Rainhill.	" "	Neglecting to cause his two children employed in Longton's brickfield to attend school.	0 2 0	0 12 0	
			Informations laid by Mr. Bateman.			
May 11	R. Gilson, cuff and collar manufacturer, William Street, Londonderry.	H. Darcus, Esq., Capt. R. B. Stokes, R.M., and J. O'Neill, Esq., Town Hall, Londonderry.	Employing Ellen Watt after 4 p.m., Saturday, 2nd May.			
"	" "	" "	Employing Mary Lunch after 4 p.m., Saturday, 2nd May.			
"	" "	" "	Employing Maggie Walton after 4 p.m., Saturday, 2nd May.	0 5 0	1 0 0	First offence.
"	" "	" "	Employing Jane Walker after 4 p.m., Saturday, 2nd May.			
"	" "	" "	Employing Mary Payne after 4 p.m., Saturday, 2nd May.			

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bateman*—cont.	£ s. d.	£ s. d.	
May 25	John Talbot, milliner, &c., Ferryquay Street, Londonderry.	R. Darcus, Esq., Capt. R. B. Stokes, R.M., J. O'Neill, Esq., and J. Thompson, Esq., Town Hall, Londonderry.	Employing Minnie Robinson after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Employing Lizzie McCandlers after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Employing Fanny Brown after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Employing Margaret Middleton after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Employing E. Wilson after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Employing E. Foster after 4 p.m., Saturday, 16th May.	0 5 0	0 3 6	
"	" "	" "	Wilfully obstructing the Sub-Inspector by refusing him admission to his workrooms.	- -	- -	Dismissed.
July 16	Samuel Osborne, blue manufacturer, 113, Milfield, Belfast.	J. C. O'Donnel, Esq., R.M., Police Court, Belfast.	Employing a child without school certificate, 18th June.	0 5 0	0 3 6	First offence.
"	Patrick McGinness, boot maker, Castle Street, Belfast.	" "	Employing a female after 8 p.m., on Saturday, 20th June.	0 5 0	0 3 6	First offence.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Mostyn.*	£ s. d.	£ s. d.	
May 5	John Brogden and Sons, Bwllfa Brickworks.	A. De Rutgen, Stipendiary, J. Lewis, and D. Davies, Esqs., Aberdare.	Employing three females under 16 in brickmaking	3 0 0	1 17 6	
„ 12	Ellen Hughes, Swansea	J. C. Fowler, Stipendiary, and Richd. Richards, Esqs., Swansea,	Employing two females in a workshop after 9 p.m.	2 0 0	1 9 6	
„	„ „	„ „	Employing three females in a workshop after 9 p.m.	- - -	0 18 0	Withdrawn on payment of costs.
„ 27	W. P. Francis, Llanelly	W. H. Nevill and E. N. Phillips, Esqs., Police Court, Llanelly.	Employing two females under 16 in brickmaking	2 0 0	0 9 0	
„	David Dovies and Co., Llanelly.	„ „	Employing one female under 16 in brickmaking	0 10 0	0 7 0	
„	E. Nurewood, Llangennech.	„ „	Employing one female under 16 in brickmaking	0 10 0	0 7 0	
„ 29	Henry Moody, Clydach	J. P. Budd and Herbert Lloyd, Esqs.	Employing three females under 16 in brickmaking	3 0 0	2 3 0	
June 10	Phillips and Evans, Merthyr Tydfil.	A. De Rutgen, Esq., Stipendiary, Police Court, Merthyr.	Employing four females in a workshop after 9 p.m.	1 0 0	1 15 0	
„ 26	R. F. Jenner, Dinas Brickworks.	George Overton and D. C. Williams, Esqs., Cefn, near Merthyr Tydfil.	Employing two females under 16 in brickmaking	1 0 0	1 8 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Mostyn*—cont.	£ s. d.	£ s. d.	
June 29	Daniel Roberts, Neath -	D. Bevan and J. H. Rowland, Esqs., Neath.	Employing one female in a handicraft after 9 p.m.	0 1 0	0 14 6	
,,	Joseph Thomas, Neath -	,, ,,	Employing two females in a handicraft after 9 p.m.	0 2 0	1 5 6	
July 3	Lewis Lewis, Cardiff -	J. Pride and Daniel Jones, Esqs., Cardiff.	Employing a female in a handicraft after 9 p.m. -	3 0 0	0 6 6	Seven other cases were withdrawn, and one summons only having been issued, only one set of costs were incurred, as explained by Justices' clerk.
,, 9	John John, Cardiff -	Col. Hill and Col. Page, Cardiff.	Employing a child of 11 without a certificate of school attendance.	- -	0 12 0	Dismissed. Costs paid by Sub-Inspector for the Crown.
,, 29	John Jenkins, Merthyr -	A. De Rutgen, Stipendiary, Merthyr.	Employing two females under 16 in brickmaking -	0 10 0	1 2 6	
,,	,, ,,	,, ,,	Employing one female under 16 in brickmaking -	- -	- -	Dismissed, but without costs against the Crown. Certificate of birth (under 16) produced, but girl's mother made oath that the birth took place earlier.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Mostyn*—cont.	£ s. d.	£ s. d.	
Aug. 5	Joseph Faull, Felin Newydd brickyard.	N. P. Cameron, C. Bath, and N. P. Williams, Esqs., Police Court, Swansea.	Employing two children under 10 years of age in brickmaking.	4 0 0	1 9 6	
„ 8	Joseph Firbank, St. Julian's brickyard.	W. S. Cartwright, L. A. Homfray, and W. S. Rees, Esqs., Newport, Mon.	Employing two children under 10 years of age in brickmaking.	1 0 0	1 2 0	
„ 13	W. H. Davies, Penylaw Brickworks.	G. Phillips and J. H. Insole, Esqs., Cardiff.	Employing one child under 10 years of age in brickmaking.	0 8 9	0 11 3	
„ 14	G. Williams, Pillgwenthy Brickworks.	R. F. Woollet and H. W. Jones, Esqs., Newport, Mon.	Employing two females under 16 years of age in brickmaking.	1 4 0	0 16 0	
„ 15	Henry Purfitt, Cwmpan Brickworks.	A. D. Berrington and E. J. Phillips, Esqs., Pontypool.	Employing two females under 16 years of age in brickmaking.	0 10 0	0 10 0	
„ 29	Thomas Mason, St. Clevis Brickworks.	Sir J. J. Hamilton, Bart., and G. Phillips, Esqs., Carmarthen.	Employing one child under 10 years of age in brickmaking.	1 10 0	0 14 0	

Appendix No. 2.

Accidents reported to Robert Baker, Esq., during the Six Months ended 31st October 1874, pursuant to the 7th section of "The Factory and Workshop Act, 1871," (which came into operation 22nd August 1871), and which provides, That the only accidents to be reported are the following; namely,

"(*a.*) Any accident which causes loss of life to any person employed in the factory; and

"(*b.*) Any accident which causes bodily injury to any person employed in the factory, and is produced by machinery or by explosion or escape of gas, or steam, or metal, and is of such a nature as to prevent the person injured by it from returning to his work in the factory within forty-eight hours after the occurrence of the accident."

Accidents.

Nature of Injury.	Adults.		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M. & F.
Causing death	59	7	12	5	5	1	76	13	89
Amputation of right hand or arm	7	–	3	1	2	–	12	1	13
Amputation of left hand or arm	7	1	3	1	1	–	11	2	13
Amputation of part of right hand	25	9	28	17	5	5	58	31	89
Amputation of part of left hand	22	12	17	8	7	4	46	24	70
Amputation of any part of leg or foot	7	–	2	–	1	–	10	–	10
Fracture of limbs or bones of trunk	38	6	33	6	7	1	78	13	91
Fracture of hand or foot	30	12	19	9	5	4	54	25	79
Injuries to head and face	60	12	25	12	5	3	90	27	117
Lacerations, contusions, and other injuries not enumerated above	525	144	356	150	87	34	968	328	1296
Total reported	780	203	498	209	125	52	1403	464	1867

LONDON:
Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

REPORTS

OF THE

INSPECTORS OF FACTORIES

TO

Her Majesty's Principal Secretary of State for the Home Department,

FOR THE

HALF-YEAR ENDING 31ST OCTOBER 1874.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1875.

REPORTS

OF THE

INSPECTORS OF FACTORIES

TO

Her Majesty's Principal Secretary of State for the Home Department,

FOR THE

HALF-YEAR ENDING 30TH APRIL 1875.

Presented to both Houses of Parliament by Command of Her Majesty.

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PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.

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1875.

[C.—1345.] *Price* 11*d.*

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[C.—1345.] *Price* 11*d.*

REPORTS

TO THE RIGHT HON. RICHARD ASSHETON CROSS, M.P.,

Her Majesty's Principal Secretary of State for the Home Department.

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Report by Alexander Redgrave, Esq.	ditto	ditto	7
Report by Robert Baker, Esq.,	ditto	ditto	59

JOINT REPORT OF THE INSPECTORS OF FACTORIES

for the Half-year ending 30*th April* 1875.

Factory Inspector's Office,
New Home Office Buildings, Whitehall,
London, S.W., 10*th Aug.* 1875.

SIR,

We have the honour to enclose our Reports for the half-year ended April 30, 1875.

We are,

Sir,

Your obedient servants,

ALEX. REDGRAVE.

ROBT. BAKER.

To the Right Hon.
The Secretary of State
for the Home Department,
&c. &c. &c.

Joint Appendix No. 1.

General Abstract showing the total Number of Accidents reported to the Inspectors of Factories during the Six Months ended 30th April 1875, pursuant to the 7th section of the "Factory and Workshop Act, 1871," (*which came into operation 22d August* 1871,) and which provides, That the only accidents to be reported are the following; namely,

"(*a.*) Any accident which causes loss of life to any person employed in the factory; and

"(*b.*) Any accident which causes bodily injury to any person employed in the factory, and is produced by machinery or by explosion or escape of gas, or steam, or metal, and is of such a nature as to prevent the person injured by it from returning to his work in the factory within forty-eight hours after the occurrence of the accident."

Nature of Injury.	Adults.		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.
Causing death	103	6	33	4	4	2	140	12	152
Amputation of right hand or arm	10	3	7	1	2	4	19	8	27
Amputation of left hand or arm	10	3	9	3	1	1	20	7	27
Amputation of part of right hand	71	24	61	34	17	6	149	64	213
Amputation of part of left hand	68	14	44	25	13	5	125	44	169
Amputation of any part of leg or foot	11	–	2	1	1	–	14	1	15
Fracture of limbs or bones of trunk	64	9	39	3	7	3	110	15	125
Fracture of hand or foot	66	8	38	15	11	4	115	27	142
Injuries to head and face	118	23	47	21	12	7	177	51	228
Lacerations, contusions, and other injuries not enumerated above	844	195	617	249	174	78	1635	522	2157
Total number reported	1365	285	897	356	242	110	2504	751	3255

Joint Appendix No. 2.

Summary of the Total Number of Informations and Convictions, or other results, with the Amount of Penalties inflicted and Costs, in the Districts of the Two Inspectors, during the Six Months ended the 30th of April 1875.

| Description of Offence. | Number of Informations. | Result. | | | | Penalties imposed. | | | |

Joint Appendix—*continued.*

Description of Offence.	Number of Informations.	Result.				Penalties imposed.																								
		Convictions.	Withdrawn or convicted with payment of Costs.	Absconded.	Dismissed.	Half a farthing.	1d.	6d.	1s.	2s.	2s. 6d.	5s.	5s. 6d.	6s.	6s. 6d.	7s. 6d.	10s.	10s. 6d.	20s.	25s.	30s.	40s.	50s.	60s.	70s.	100s.	40l.
Brought forward -	542	388	144	–	10	–	–	5	71	8	34	3	2	1	–	10	–	199	1	2	71	5	10	8	1	–
Employing children, young persons, and women after 12.30 on Saturday -	30	20	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	–	–	–	–	–	–	–	–
Employing children, young persons, and women after two o'clock on Saturday	11	6	5	–	–	–	–	–	–	–	–	–	–	–	–	2	–	3	–	1	–	–	–	–	–	–
Employing children, young persons, and women after four o'clock on Saturday	28	23	5	–	–	2	–	–	–	–	–	–	–	–	–	1	–	15	5	–	–	–	–	–	–	–
Employing children, young persons, and women during meal hours - -	101	44	53	–	4	–	–	–	–	–	–	–	–	–	–	–	–	36	–	3	3	–	2	–	–	–
Employing children for two consecutive entire days - - - -	1	1	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Employing children, young persons, and women on Sunday and Good Friday	26	7	19	–	–	–	–	–	–	–	4	–	–	–	–	–	–	2	–	–	1	–	–	–	–	–
Employing females under 16 and boys under 10 years of age in brickworks -	4	4	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	3	–	–	–	–	–
Parents allowing their children to be illegally employed during the night -	4	4	—	–	–	–	–	–	–	–	2	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–
Parents employing or conniving at the illegal employment of their children - - -	67	38	25	–	4	–	–	1	–	–	2	27	–	–	–	2	2	2	2	–	–	–	–	–	–	–
Parents neglecting to cause their children to attend school - - -	174	119	50	3	2	–	1	9	7	1	12	60	–	4	1	2	20	1	1	–	–	–	–	–	–	–
Neglecting to report accidents to the certifying surgeon - - -	4	4	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	–	–	–	–	–
Not lime washing as required by law - -	3	3	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	1	–
Issuing and making use of false certificates of school attendance - -	2	—	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Wilful obstruction of the Sub-Inspector in the execution of his office -	6	2	1	–	3	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
Total - -	1008	663	314	3	23	2	1	15	28	5	26	123	3	6	2	4	35	3	283	9	6	82	5	14	8	1	1

The total amount of fines inflicted £657 12*s.* 7½*d.* The total amount of costs, £467 13*s.* 3½*d.*

REPORT of ALEXANDER REDGRAVE, Esq., Inspector of Factories, for the six months ended 30th April 1875.

Factory Inspectors' Office,
New Home Office Buildings,
Whitehall, 10*th August* 1875.

SIR,

I HAVE the honour to submit my forty-fifth report upon the state and condition of factories and workshops and of the persons employed therein.

The various regulations of the different Acts of Parliament continue to be observed with laudable good feeling and appreciative earnestness throughout my district.

The principal difficulties we have had to contend with have arisen in rural localities, in the pillow lace, and straw plait districts, where, as in the manufacturing districts 40 years ago when wages were at a minimum, and the earnings of children were absolutely a necessary part of the subsistence money of the family, it is almost impossible to insist upon the children going to school, without incurring the reproach of the parent, "Who then is to find them bread?" There are school boards in very few of these localities, and where school boards have been established they have not taken compulsory powers, so that the whole educational force is vested in the Inspector of Factories, and he, under the Workshops Act, has power only to require school attendance of children who may chance to be working, and who successfully evade the faulty regulations of that Act, and enjoy the pecuniary advantages of unregulated labour in the face of apparently strict laws for enforcing school attendance.

In a previous report I alluded to the difficulties we sometimes experienced in the sympathies of even the better class of neighbours of these lace and straw plait schoolmistresses being all against the principles of the Workshop Act, and that while we were urging compliance with, the others were encouraging opposition. Mr. Wood has just reported to me from Bedfordshire that he has now to contend with a sort of propagandism of opposition from a new quarter. He says:—

"I find that the lace buyers who travel round the country villages have studied the whole question, and watched my prose-

cutions, and they point out the weak places of the law to the pillow lace makers, and show them how they can evade the Act."

And Mr. Lakeman, writing from Suffolk, calls my attention to the case of an inveterate straw plait mistress who overcrowds her cottage and openly evades the law, and who was prosecuted a year ago. The fines and costs were then paid for her by a farmer, by whose support and advice she has been again overcrowding and illegally working. I have been again obliged to direct her prosecution, and she again leans upon the farmer, who evidently wishes to secure to her that immunity from the Workshops Act which he enjoys from the Agricultural Children's Act.

The Return which has just been presented to the House of Commons of the number of textile factories, and of the persons employed in them, shows the continued progress of every branch of trade; and it shews also that which is of great importance, that the power of production is increased by improved machinery and processes, to make up for the increasing scarcity of manual labour in the manufacturing districts.

There has been a desire expressed in several influential quarters that returns such as this should be published annually. Merchants wish to see at a glance the productive power of the country at more frequent intervals than those at which similar returns have hitherto been published.

These returns are obtained by this department upon application to each individual manufacturer. The manufacturers, with singular readiness and courtesy, supply the information sought, and then the return is completed. But manufacturers undoubtedly do object to be applied to for returns, and some few, for reasons of their own, as to which I do not wish to make a single hostile remark, have declined to give any information as to their factories.

If therefore returns are to be required at frequent intervals, such as annually for instance, it would be very desirable that there should be a distinct enactment that returns should be forwarded to the Factory Department.

For the purposes, however, of a comparison of the progress of the country, it will be sufficient for me to take decennial periods. And I would call attention to some of the facts shown in the returns for 1850, 1861, 1871, compared with the return of the present year. There is an advantage also in taking the decennial periods named above, as they are those of the census.

The number of factories in the five great classes of textile fabrics are—

—	1850.	1861.	1871.	1875.
Cotton	1,932	2,887	2,483	2,655
Wool, &c.	1,497	1,679	1,949	1,925
Worsted	501	532	630	692
Flax, &c.	393	439	598	620
Silk	277	771	696	818
	4,600	6,308	6,356	6,710

The number of spinning spindles in the above factories.

—	1850.	1861.	1871.	1875.
Cotton	20,977,017	30,387,467	34,695,221	37,515,772
Wool, &c.	1,595,278	2,182,609	2,664,979	3,266,703
Worsted	875,880	1,289,172	1,821,144	2,182,792
Flax, &c.	965,031	1,252,286	1,710,295	1,712,001
Silk	1,225,560	1,338,544	940,143	1,114,703
	25,638,716	36,450,028	41,831,782	45,791,971

The number of power looms.

—	1850.	1861.	1871.	1875.
Cotton	249,627	399,992	440,676	463,118
Wool, &c.	9,439	21,770	50,830	58,527
Worsted	32,617	43,048	64,659	81,747
Flax, &c.	6,092	15,348	39,738	51,601
Silk	3,670	10,709	12,378	10,002
	301,445	490,867	608,281	664,995

The points worthy of remark in the above figures are that each factory is relatively much more productive in 1875 than in 1850. For instance, the proportion of spinning spindles to factories was as follows:—

	In 1850.	In 1875.
Cotton	10,857	14,130
Wool, &c.	1,065	1,696
Worsted	1,748	3,154
Flax, &c.	2,455	2,760

The proportion of power looms:—

	In 1850.	In 1875.
Cotton	129	174
Wool, &c.	6	30
Worsted	65	118
Flax, &c.	15	82

If these facts were taken by themselves, it might be argued that they show nothing more than this, viz., that since 1850 there has been a tendency to increase the size of the factories; that it has answered far better to concentrate machinery in one factory, and that consequently the smaller factories have ceased to be occupied. It is to some extent the case. It is more economical in every way to work a large factory than to work a small one; but the principal cause has undoubtedly arisen from the necessity, in the enormous development of trade, to make machinery more and more self-acting, and less dependent upon manual labour. This is shown in a remarkable manner by the next column in the Factory Return, that of the number of power loom weavers.

This particular was first observed in 1861; and it is really a most instructive part of the returns. The power loom weavers for the three periods were:—

	In 1861.	1871.	1875.
Cotton	166,209	165,341	163,632
Wool, &c.	17,115	35,140	42,647
Worsted	28,787	35,746	39,937
Flax, &c.	11,173	25,706	33,393
Silk	7,279	6,334	6,080
	230,563	268,267	285,649

Now the proportion of looms to each weaver shows how immensly improved must have been the actions of machinery since 1861 to permit of so much more work being superintended by one person.

Proportion of Looms to Weavers.

	1861.	1875.
Cotton	1 and $\frac{3}{4}$	2 and $\frac{5}{6}$
Wool, &c.	1 and $\frac{1}{4}$	1 and $\frac{2}{3}$
Worsted	1 and $\frac{1}{2}$	2
Flax, &c.	1 and $\frac{1}{3}$	1 and $\frac{1}{2}$

This is perhaps more striking in the cotton trade than in any other class of textile factory, for while the number of looms has increased from 399,992 in 1861 to 463,118 in 1875, the number of weavers to attend these looms has decreased from 166,209 in 1861 to 163,632 in 1875.

There are no data by which we can so nearly compare what has taken place as regards spinning machines, but an approximation may be arrived at by comparing the number of spinning spindles in the factories in Lancashire solely occupied in spinning with the number of persons employed in them in the two periods of 1850 and 1875.

In Lancashire in 1850 there were 517 cotton spinning factories, containing 6,110,074 spinning spindles, and employing 56,012 persons, which gives 110 spindles to each person employed. In 1875 there were 767 factories, containing 16,415,071 spinning spindles, and employing 100,178 persons, which gives 163 spindles to each person employed.

The next part of the return calling for observation refers to the number and classes of persons employed in these factories. The actual numbers are—

Children between 8 and 13 years of age.

	1850.	1861.	1871.	1875.
Cotton	14,993	39,788	43,281	66,900
Wool, &c.	7,094	5,969	6,021	8,588
Worsted	9,956	13,178	18,306	29,828
Flax, &c.	1,581	3,644	5,562	12,678
Silk	7,151	7,014	6,928	6,871

Males between 13 and 18 years of age.

	1850.	1861.	1871.	1875.
Cotton	37,059	41,207	38,209	38,557
Wool, &c.	11,884	11,213	14,197	13,972
Worsted	7,695	6,614	9,481	11,259
Flax, &c.	8,012	8,754	13,666	15,195
Silk	3,214	3,224	2,662	2,381

Females 13 years of age and above.

—	1850.	1861.	1871.	1875.
Cotton	183,912	251,806	251,551	258,667
Wool, &c.	26,810	34,622	61,426	66,324
Worsted	46,901	47,652	56,820	69,388
Flax, &c.	46,843	65,039	97,896	112,570
Silk	25,111	32,029	29,481	27,841

Males of 18 years of age and above.

—	1850.	1861.	1871.	1875.
Cotton	94,960	119,268	117,046	115,391
Wool, &c.	28,655	35,179	47,302	49,169
Worsted	15,185	18,619	24,950	31,622
Flax, &c.	11,998	16,646	28,269	31,344
Silk	7,068	10,162	9,053	8,466

We see from these figures the corroboration of what I have stated on the substitution of self-acting machinery for manual labour. The increase in the number of hands employed has been in the two classes whose labour is cheapest, that of children under 13, and of females of 13 and above.

The centesimal proportion each class bears to the whole persons employed are here given :—

—	Centesimal Proportions.							
	Children.		Male Young Persons.		Females of 13 and above.		Males of 18 and above.	
	1850.	1875.	1850.	1875.	1850.	1875.	1850.	1875.
Cotton	6·4	14·	10·3	8·	55·9	54·	27·4	24·
Wool, &c.	8·5	6·	14·1	10·	38·7	48·	38·7	36·
Worsted	12·7	20·	8·1	8·	58·6	49·	20·6	23·
Flax, &c.	2·3	7·	11·1	9·	69·6	66·	17·	18·

These figures are of great interest. They show what the progress of the textile manufactures of the country has been; what a vast population depends upon the manufacture of textile fabrics by the aid of mechanical power, and, speaking in my office of Factory Inspector, I see in them a justification of the laws which have been passed, while they continue to impress upon me that necessity for the utmost care and judgment in dealing with such enormous interests, in which the well-being of so large a population is involved, which it has been my endeavour and desire to appreciate and to keep in view.

Our returns, which have been received with confidence for many years, were at last found fault with as being very inaccurate for the year 1871. I have refrained from noticing the objections made to the return for that year until a return for a later year should be prepared, which would then prove whether any ground really existed for the charge of inaccuracy made and repeated from 1872 until the present time.

The returns for 1850, 1861, and 1871, were prepared under my own supervision. We believed them to be fairly accurate and reliable. No objections were made to the returns for 1850 and 1861, but most extraordinary errors were alleged against the returns of 1871. And this was the more singular, because that return of all preceding returns was prepared with the utmost care, sufficient means having been placed at my disposal to secure the preparation of the return satisfactorily and accurately.

When therefore I read the proceedings of the Chamber of Commerce of Bradford, I was simply amazed. The statements made there and embodied in several representations to the Secretary of State, were as follows:—

That the number of spinning spindles returned for the woollen and worsted factories ought to have been 8,000,000 instead of 4,000,000, and the number of power looms in the worsted trade ought to have been 160,000 instead of 57,000:—

These charges are founded upon the amount of wool imported and retained for home consumption, according to the Board of Trade returns, and the estimated amount of wool grown in this country:—

That this actual quantity and the estimated quantity, taken in conjunction with the actual quantity of yarns and pieces exported and the estimated quantity consumed at home, were estimated to require twice the number of spinning spindles and thrice the number of looms given in the return.

Naturally I referred to former returns to ascertain the rate of progress as evidenced by them, and to the Board of Trade returns, to ascertain the rate of progress as shown by the exports of yarn and goods and importation of wool.

I found that the number of worsted factories in the United Kingdom was as follows; and I have now added the number in the beginning of the present year :—

1850	501
1861	532
1871	630
1875	692

The manufacturing machinery, as follows :—

First, of spinning spindles,—

1850	875,830
1861	1,289,172
1871	1,659,976
1875	2,182,792

The centesimal increase is :—

1861 over 1850	45 per cent.
1871 „ 1861	29 „
1871 „ 1850	90 „
1875 „ 1851	150 „

Secondly, of power looms :—

1850	32,617
1861	43,048
1871	56,063
1875	81,747

The centesimal proportions :—

1861 over 1850	34 per cent.
1871 „ 1861	30 „
1871 „ 1850	74 „
1875 „ 1850	150 „

Of persons employed :—

1850	79,737
1861	87,794
1871	109,577
1875	142,097

The centesimal increase :—

1861 over 1850	8 per cent.
1871 „ 1861	26 „
1871 „ 1850	37 „
1875 „ 1850	78 „

I need not give the actual figures of the quantity of woollen and worsted yarn exported, they rose from 14,000,000 pounds in 1850 to above 34,000,000 in 1874; but the centesimal proportion of increase has been :—

1861	over	1850	80 per cent.
1871	„	1861	65 „
1871	„	1850	190 „
1874	„	1850	149 „

The increase in the exports of worsted pieces has been :—

1861	over	1850	64 per cent.
1871	„	1861	151 „
1871	„	1850	166 „
1874	„	1850	127 „

The quantity of wool imported and retained for home consumption has increased thus :—

1861	over	1850	33 per cent.
1871	„	1861	103 „
1871	„	1850	170 „
1875	„	1871	191 „

It appeared to me, upon considering these figures, that if no faults existed in the returns for 1850 and 1861, which had never been objected to, that for 1871 was as much to be depended upon as they were.

No doubt has been thrown upon the returns as regards the cotton trade, the woollen trade, the flax, hemp, and jute trade, or the silk trade. On the contrary, the returns have been relied upon in the various trade circulars, and by persons having special knowledge in their particular branch of business.

In one trade, the flax trade, an independent inquiry was conducted by the Flax Association of Ireland in 1874, when the flax spinners were very desirous of ascertaining the exact state of the trade at that date; and the result of their inquiry proved incontestably the correctness of the return of 1871. In that return, 13th February 1874, the number of spinning spindles in the flax, tow, hemp, and jute is as follows :—

Running 895,623, standing 13,867; total 909,490.

The factory returns for 1871 gives these figures :—

Running 797,033, standing 76,899; total 873,932.

The return for 1875, one year later than that of the Flax Association, gives the following :—

Running and standing, 921,782.

The analysis also which I have made of the various textile factories must show that such egregious inaccuracies as those suggested have really no foundation whatever.

If the alleged errors in the return for 1871 had not originated from a public body, consisting of gentlemen specially conversant with the trade which was the subject of their animadversions, and of gentlemen engaged in that special trade, and among those from whom the inaccuracies must have been received, I should not perhaps have considered it necessary to revert to the subject. But the objections having been made and reiterated in a public manner and by a public body of so great importance as the Chamber of Commerce of Bradford, I cannot pass over their allegations upon the accuracy of returns made public through the medium of this Department.

As I have stated, the returns for 1871 were made with special means. The present return has been prepared under additional precautions for ensuring accuracy, having been placed in the hands of the most qualified person in the Department, Mr. Sub-Inspector Oram. As to the worsted factories, in the first place each return has been examined by Mr. Oram; every return has been examined by myself, who have a fair knowledge of the capacities of the factories in Bradford, and the services of the resident Sub-Inspector, Mr. Beaumont, have been called in to assist in the examination of each return. Inaccuracies have been corrected, omissions have been supplied, and I state unhesitatingly that the return for 1875 is accurate, and that the return for 1871 is, as I always believed it to be, equally accurate.

The Chamber of Commerce of Bradford appears to have overlooked a most important fact, which certainly ought to have been known to some of the members, that there is not one worsted factory in the kingdom which has as many as 50,000 spinning spindles. I think it right to mention, moreover, that there are only six worsted factories with as many as 30,000 spinning spindles, and of these six, only two have more than 40,000 spindles.

It is possible that gentlemen turning their eyes to the cotton factories may think that some of the worsted factories are as large as those; but they are not perhaps aware that there are many cotton factories with more than 100,000 spindles in them, and that in 15 cotton factories there are 2,202,072 spinning spindles, while the spinning spindles of the whole of the worsted factories in the United Kingdom amount only to 2,182,792.

It is impossible that so gross an error could have been made in the course of the preparation, under my super-

intendence, of the returns of 1871, as enumerating only half the proper number of spindles and one third of the proper number of looms. I did not believe either that the worsted manufacturers would make such careless replies to our applications as to give only one half and one third of the actual state of a great and important industry, at the time that their representatives in the Chamber of Commerce were loudly proclaiming the importance of accurate returns being made. And my confidence in the correctness of my return for 1871 was much increased by finding in my conversations upon the subject of the alleged inaccuracy of the return, the great indifference which existed as to what was in substance the charge made by the Chamber of Commerce, that only one half the worsted trade had made correct returns. And I am now, after the full and searching investigation of the returns just prepared, justified in relieving the worsted manufacturers from the imputation that they have declined to furnish returns, or that they have sent in such grossly inaccurate schedules as to warrant the alleged deficiencies.

Evidence of a somewhat startling nature has been "going the round of the papers" lately, pointing to a gradual decline and increasing degeneracy in our manufacturing population. It is stated that in the heart of the cotton districts children are less healthy, less in stature and weight, and less equal to the work of a factory than they were years ago. Such statements are indeed disheartening in the face of the improved sanitary condition of our factories themselves, of the substitution of self-acting machinery for that which required the assistance of manual labour, of the constant lightening of the work required of the factory operative, and of the shortening of the hours of labour of the women and children, and thereby, indirectly, of the shortening the duration of labour of the men themselves.

Dr. Ferguson, a certifying surgeon for the last 14 years, and having taken a deep interest in the question for the last 40 years, tells us—

"That there was a steady deterioration going on amongst the factory population; he kept an accurate account of the physical development of all children who came under his notice and found that the number of children presented physically unfit to work full time went on increasing year by year. He had noted exactly the weight of such children at the time of passing and their physical development generally; when he had met the same children at the end of three months and in many cases at the end of six months, he found that in many instances they had not increased in weight a single ounce. Showing, in his opinion, that

their physical powers were being overtaxed. During the five years ended with 1873, quite one half of the children that came before him were physically unfit to work full time, and the numbers increased year by year."*

Now, it is to be observed, that the above remarks are exclusively confined to the condition of young persons of 13 years of age who presented themselves to the certifying surgeon for his certificate authorising them to be employed for full time. Full time at the present time means a maximum of 10 hours a day. It is a common habit to call children under 13 "half-timers," but in reality they work, one way or another, a good deal more than half time, frequently very much more like full time. For instance, if the dinner hour is from 1 p.m. to 2 p.m., a child under 13 works each alternate week for six hours and a half in the factory, and for three hours in the school; which amounts only to half an hour less per day than a full-timer, and the child has to rise as early in the morning as the adult. It is true that in the off weeks the child works in factory and school six hours and a half per day, but then it works as late as the adult. I do not for a moment mean that the work of the child divided between the factory and the school is not less fatiguing than that of the young person in the factory alone, and that the variation of work and school has not advantages over work alone, but I consider it is incumbent upon us to appreciate the fact, that, taking into consideration work and school, a half-timer, and especially if he has the task of having lessons to prepare out of school, is worked nearly as much as a full-timer; and if it were not for the variation of the occupation, partly in work and partly in school, the labour of the one would be nearly as great as the labour of the other. When, therefore, the opinion is expressed that one half of the children who have completed their 13th year are physically unequal to work for 10 hours in a factory, it is really necessary for us to know for how many hours per day they are physically able to work, either wholly in the factory or partly in factory and partly in school; recollecting this fact also, that the atmosphere of a school is about on a par with the atmosphere of a factory, there being a fixed abhorrence in the factory population of fresh air being allowed to be sensibly felt in any room.

This evidence of a certifying surgeon is somewhat startling also from the fact that it is diametrically opposed to the practice, with two or three exceptions, of the whole

* "Manchester Examiner and Times." 5th July 1875.

of his colleagues for years past. And I feel this the more pointedly because, of all the inspectors, I have been most strenuous in insisting that the certifying surgeons should not pass for full time children whom they consider to be physically equal to work full time until they are really 13 years of age. I have even incurred the displeasure and sarcasm of the certifying surgeons because I have caused their certificates to be annulled, and have shown that instead of preventing the employment of children under 13 for full time, they have actually encouraged the system by their careless and misapplied performance of their duties. It has not been a question that these children were not physically able to work full time,—to this the surgeons certified their conviction,—but I insisted that as all children under 13 must attend school, the fact of a child being in the opinion of a surgeon able to work full time ought not to deprive it of that education to which the law requires it should be subjected until the age of 13 was attained, and that no child, even though in the opinion of the certifying surgeon physically able to work full time, could by law be certified by him, unless of the full age of 13: and looking back to a period of many years, I have the satisfaction of knowing that my firmness in this matter has rescued hundreds and hundreds of children from the bondage of working all day long before they ought to have left school.

I annex here the copy of a circular which I addressed above 20 years ago to the certifying surgeons of my district, after having found in many localities that it was the constant practice of the certifying surgeons to certify children sometimes even of between 10 and 11, to be in their opinion capable of making full time; at the date of the circular 12 hours actual work per day:—

"Having had occasion lately to complain, both during my own inspections, from the Reports of the Sub-Inspectors, and from other circumstances which have been brought under my notice, that some of the certifying surgeons have granted full-time certificates to children of even less than 12 years of age, thereby defeating some of the most important provisions of the Factory Acts, being those very provisions, for the successful administration of which the office of certifying surgeon was created, I think it necessary to point out to you that the law requires the full age of 13 to have been completed before any person is qualified to work for ten hours and a half per day; and that the certificate granted by the certifying surgeon contains an express declaration of his *belief* of the real age being at least 13, as well as his *opinion* of the health and strength of the young person presented to him: it is not sufficient if the young person has the ordinary strength and appearance of 13 years of age, and be

not incapacitated by disease or bodily infirmity—it must also have attained the full age of 13. I must therefore beg you will so act as invariably to give effect to these enactments of the law."

The number of the certifying surgeons in my district is about 530. I know that the vast majority of them refuse to pass any children for full time unless they are really 13, although there are still among them those who, regardless of the age, are apt to declare children much under 13 to be capable of working for full time. I believe that the certifying surgeons of my district did conscientiously feel that the children they passed as full-timers were physically capable of working full time. In fact they considered that they were not to inquire so particularly about the age of a child, but that their experience as medical men was required to be exercised as to the point, whether the child was capable of making full time, and the certificate was given accordingly; and it was a constant practice of some of the certifying surgeons to certify children much under 13 years of age to be capable of working 12 hours a day. I confess to some difficulty in reconciling this with the evidence so recently given, that children above 13 are now unable to work 10 hours a day.

I think the points I have named as bearing upon the amelioration of factory labour hardly require proof.

I refer to—

1. The improved sanitary condition of factories.
2. The increase of self-acting machinery and consequent lightening of manual labour.
3. The diminution of the hours of work.

As to the first, I may refer to former reports in which I have shown how the atmosphere has been rendered more healthy by improved machines which inclose the dust and fibre which they evolve from the raw material—for instance, I mentioned a cotton carding machine in use, which did not require to be ground for six months—by better ventilation, by removal of offensive nuisances, by increased cleanliness.

As to the second, I have referred to the wonderful improvements, for instance, in the woollen manufacture, whereby the somewhat severe labour of children as billypiecencrs was entirely done away with, and in that and other manufactures by the adaptation of improvements, whereby the force of the machinery generally is so tempered that the fragile ends break so much less frequently, whereby the machine stops automatically when one end breaks, and the attention of the child or woman has only to be directed to see that the machine is in motion, instead of having to watch each

individual end and notice when it breaks. In all of which, and in many more ways, the labour of the operative has been lessened. And I hear now of an invention likely to be widely adopted, whereby, in the system of throstle spinning, the yarn in the course of the spinning, is, through the increased delicacy of the distribution of the force of the machine, liable to be broken only one sixth as often as under the existing system.

Upon the last point, the hours have been gradually reduced from 12 to 10 per day, from 68 to 56½ per week.

Thousands of children much under 13 were certified by the certifying surgeons up to 1848 to be capable of working 12 hours per day. Can children of the full age of 13 have become so feeble and defective in physical development as to be now unfit for 10 hours work, less in severity, and carried on under improved sanitary conditions?

This brings me to the consideration of the question which underlies the whole of the subject which has been brought forward by Dr. Ferguson. It is this: What standard has been fixed upon in this instance which must be attained by boys and girls of at least 13 years of age to justify them being employed for full time? Different standards must be fixed for each sex. The standards of height and of circumference as indications of age and fitness for work were tried years ago under the careful investigation of Mr. Horner, and were found to be unreliable. Height and circumference of chest are merely another mode of ascertaining weight, and I fear the applying the test of weight as a qualification for factory labour would be as unsatisfactory now as it was in the days of my late colleague Mr. Horner.

It is of great importance that a test of physical ability to work full time should be so defined that it should be one that can be measured, that can be formularized, and be examined over a very large area. We have the phenomenon of one eminent certifying surgeon broaching a very important idea, utterly at variance with the practice of numerous equally eminent colleagues, and for those who like myself and hundreds of certifying surgeons have believed children of 13 to be physically capable of working full time, the giving only a general statement over a limited area of facts based upon an undefined principle, is far from satisfactory. Before we can accept as proved the statement that the factory population is degenerating, a very clear and detailed publication of facts, gathered, not in one town only, but in 50 towns, must be presented to us. It is not

sufficient for a certifying surgeon to allege that "one "half of the children that come before him are physically "unfit to work full time," and that after the lapse of three and six months children have not increased one ounce in weight, it is necessary to know, for instance, the total number of children that have come before the surgeon, the actual number that were passed for full time, the actual number that were at least 13 years of age, the actual number that were not 13 years of age, the numbers that were weighed, and the weight of these, the numbers that were re-weighed, and the actual weights then found; and then a similar range of facts for some 15 or 20 years ago, so that we may compare the present with the past, and even with such facts before us, we must have thoroughly cleared up all doubts as to that which constitutes physical ability to work full time.

The textile manufactures of this country have gone through three phases, each unlike the other, and in considering the physical condition of factory operatives at the present day it is essential not to take that condition by itself, but to compare the present state of things with the two distinct anterior periods.

For many years the textile manufactures were carried on in the rural districts only. The power used was water. Water on the hill sides was irregular in its flow; work was therefore irregular. When the stream was full work was brisk, we should now call it excessive; when the stream was dry the factory hands were employed on the land, in haymaking or in bilberrying, or other like occupations. Thus the factory operatives were both farm labourers as well as factory workers, and as manufacturing was not the complicated affair it is now, they were free from many of the evils which afterwards arose from the introduction of steam and the immense enterprise and energy of our manufacturers. In some places this patriarchal system of manufacture existed even in comparatively recent times. About 25 years since I visited a factory, the occupier of which farmed also a considerable quantity of land, and I was invited to his house by the hospitable farmer and manufacturer. It was the dinner time, and I sat down with the host and his family at the head of a long table, at the lower end of which his factory and farm hands also sat at dinner. The contrast was indeed striking, after having left a northern manufacturing town where every week day was spent inside the factory, where there was a sharply defined line between the capitalist and the

operative, the product of modern enterprise, to find the old patriarchal system in full force, the master working with and living with his labourers, who, though they worked hard, were not confined to the stifling atmosphere of a factory, or to the monotonous occupation from January to December of watching for broken threads, but enjoyed fresh air, variety of work, and personal association with their masters.

After this system came that of manufacture, pure and simple; the erection of large steam factories, the bringing together, without previously providing adequate and proper means for healthy and decent accommodation of, hundreds of families to fill those buildings, and then followed immediately the proneness to run the costly machinery regardless to the cost of human life, health, and happiness, for any number of hours daily that seemed good to the capitalist.

It was during this period that the factory hand became changed from the healthy labourer to the weakly, anœmic, and frequently decrepid operative. Doubtless, from the cost of the introduction of steam, and the desire to run the machinery as long as possible, the factory hands did degenerate from the sturdy labourer and operative in the valleys and on the hill sides of Lancashire and Yorkshire to the wasted and down-trodden operative of the purely manufacturing town, working daily, and all day long, and possibly part of the night also, in a close, hot, ill-ventilated factory, returning from work to a dwelling more unhealthy than the factory, until the factory population appeared to have become a distinct race, that was known at a glance, so defined had the effects of overwork and unhealthy dwellings become upon the physical appearance and condition of the people.

The harvest of ills from this state of things, the combined effect of overwork in hot ill-ventilated factories, and residence in unhealthy houses, reached its climax in 1833, when the first real Factory Act was passed, and since 1848—for nearly 30 years past—the hours of work have been moderate, factories better ventilated and more healthy, work lighter, towns and dwellings becoming year by year more healthy and better ordered.

Thus the third phase of factory life dates from the year 1848, and, although the factory operatives in some of our densely populated factory towns may not compare favourably with the operatives who worked in the country districts under what I have called the patriarchal system, yet the factory operatives in the smaller textile towns and the

villages of Lancashire and Yorkshire are as well grown, as well developed, and as healthy as the working classes in any county in the Kingdom.

I admit that in some of our towns the factory children may not be as to physical condition altogether what I should like to see them. But if the experience of a layman is worth anything, I can vouch that, generally, there has been a material improvement in their physical condition even in these cases since 1848.

It is admitted that the arrangements of factories have been improved, that the conditions of labour are more favourable to health than formerly, and it is stated that the alleged deterioration has been caused by the improper habits of the operatives, by the substitution of tea for milk for children, and by the abuse of tobacco and tea and alcohol by both young and old.

Into the cogency of these reasons I will not further enter than to express a doubt whether the consumption of alcoholic liquors has increased to so great an extent as to affect the health of the operative class of our population.

In making some inquiries four years since, specially into the habits of the working classes, I was met by facts which I think point to the conclusion that the consumption of strong drinks has not increased in this country. Upon this point I expressed my opinion as follows:—*

"Whether that degrading vice (drunkenness) has increased within the last 30 years it would be difficult to prove. It is a vice that is only known when carried to its extreme of being indulged in in public; we can know nothing statistically of private indulgencies. But that we are better than we were a long time ago must be patent from this fact, that in 1742 each individual in England and Wales consumed three gallons of spirits, and that in 1841 the consumption was at the rate of ·51 gallons per head, a rate at which, with some fluctuation, it has remained to the present day (1871).

"The consumption of malt has slightly increased. In 1841 it was at the rate of one bushel and one third per head. In 1870 it was at the rate of one bushel and two thirds.

"The consumption of wine has increased; we find that the average consumption per head was in 1841 a little more than one fifth of a gallon, while in 1870 it had risen to half a gallon per head."

Now wine is not the beverage of the operatives. The increase in the consumption of wine proves nothing against them. But the decrease in the consumption of spirits does

* The Progress of the Nation. A Lecture delivered before the Philosophical Institute of Bradford on the 30th November 1871; by A. Redgrave, Esq. Harrisons. Pall Mall, London.

tell in their favour, and it cannot be gainsayed that herein has been a considerable improvement in the habits of the people.

On the other hand, the consumption of beer has increased. Beer is a beverage of the operatives, but essentially the beverage of the middle and lower middle classes, and it is by these two classes that beer is now so largely consumed. I may point to two facts, that the number of public-houses and beer-shops, the resort of the operatives, has decreased, while the number of railway refreshment bars, and again of luncheon bars, in every town in the kingdom has increased, these latter being the resort—not of the operatives, who never go inside one—but of the middle and lower middle classes, which together account for the increase in the consumption of beer.

I am very loath, therefore, to attribute a deterioration of race to a cause which does not appear to me to exist, viz., the increase of immoral habits.

In the second phase of factory life to which I have referred, viz., that previous to the year 1833 the predominant evils which were found to have arisen were those caused by the continuance of long hours, by the want of sufficient rest during working hours, by the necessity for the operatives being incessantly moving about, their feet and legs being weary even at the commencement of the day's work.

By all the testimony that can be gathered it is made clear to us that the physical evils brought so prominently forward by the medical evidence in the report of the Factory Commissioners in 1833–34 have ceased to exist. The breaking down of the health, the curved spine, the deformity of the extremities are not now to be met with; but we are confronted with a new evil which has come upon us in the development of the factory system, which improved sanitary arrangements of dwellings, better water supply, purer air, more satisfactory drainage, are not sufficient to eradicate. I mean the increased and increasing employment of women in factories.

At the time of unregulated labour, according to the official returns published in 1835, there were employed in the cotton factories in Lancashire, on the average, 80 females of 13 and above in each factory; according to our last returns (1875) each factory, on the average, contained 100 females of 13 and above.

In the woollen and worsted factories of Yorkshire in the same year each factory contained 25 females of 13 years

of age and above; by our last returns (1875) each worsted factory contained 100 females of 13 years of age and above.

Evidence has been given again and again of the unhappy consequences to child-life and infant development of the working of the mothers in factories.

A great deal has been advanced lately against the impolicy of placing any restrictions upon the labour of adult women, and upon securing to them the power of making contracts as adult men, and even those who admit the force of these principles cannot shut their eyes to the evils which have existed and still exist in the employment of mothers in factories, and which from the demand for adolescent and adult female labour in factories are not likely to subside of themselves. The abstention from factory labour of women for a month or six weeks after confinement would to a small extent mitigate the evil as regards their more certain restoration to health, but it would not touch the evils of the loss to the infant of its natural food and of maternal care and love while abandoned to the indifference of a sordid nurse and the baneful influence of a soothing cordial. Here is a question which demands our most serious consideration, whether, either by means of legislation or by other less direct but as effective means, the health of the mother and the well-being and physical development of the offspring can be protected, so as to prevent eventual deterioration, and to promote health and happiness in so large a population as our factory operatives.

I have, &c.,

ALEXR. REDGRAVE.

The Right Honourable the
Secretary of State
for the Home Department.

Appendix No. 1.

Report of Daniel Walker, Esq., Assistant Inspector of Factories.

Sir, *Dundee, 14th July* 1875.

I send you my report for the last six months.

Scotch School Boards.

In former reports I have called your attention to the course pursued by some school boards in Scotland in throwing difficulties in the way of the employment of half-timers, more particularly in refusing to recognize the attendance at school prescribed by the Factory and Workshops Acts as a sufficient compliance with the Scotch Education Act, thus causing great trouble and annoyance not only to millowners but also to the parents of the children. In proof of this, I subjoin copy of a letter addressed to me by the principal millowners in Selkirk and the immediate neighbourhood.

"Sir, Selkirk, 8th March 1875.

"We beg to draw your attention to a report in the *Scotsman* of to-day of a meeting of the Selkirk Burgh School Board, by perusal of which you will observe that there is an attempt being made by that board to enforce full-time attendance at school on the part of children employed as half-time workers at factories.

"This proceeding on the part of the Board is in direct opposition to advice recently obtained by them from the Board of Education in Edinburgh on the subject, and is, in our opinion, an attempt to evade the plain provisions of the Factory Act.

"The manufacturers here, having made arrangements to meet the half-time system, as directed by the Factory Act (7 Vict. c. 15), and being convinced that the course adopted by the School Board, if successful, will completely nullify such arrangements, have, as you will see by the newspaper report, protested in a body against their action in the matter. The manufacturers who, we need hardly inform you, are the principal ratepayers in the burgh, have received no reply from the School Board, and a majority of that body still insists upon testing the question by bringing a case before the Sheriff.

"The arrangements connected with the half-time system having been carried out by the manufacturers with considerable trouble and inconvenience to themselves, and under the direction and approval of the inspector, will you kindly oblige us by informing us of our actual legal position in the event of the School Board

getting a verdict favourable to their wishes, and what redress is possible under the circumstances.

We are, &c.

(Signed) "J. and H. Brown & Co.
"Geo. Roberts & Co.
"Waddell and Turnbull.
"Dobie and Locke.
"Cochrane, Smith, and Bathgate.
"Geo. Anderson & Co.

"Daniel Walker, Esq."

To this letter I returned the following answer:—

"Broughty Ferry,
"Gentlemen, 11th March 1875.

"I wrote to you on the 9th instant, to which and to the copy of the Factory Inspectors Reports for the half-year ending 30th April last, I refer.

"I have now to acknowledge receipt of your letter of the 8th inst., in which you ask me to inform you of your legal position in the event of the School Board being successful in their endeavour to exclude half-time children from the public schools under their jurisdiction, and also what redress would be open to you under those circumstances.

"As these are legal questions, any opinion of mine regarding them would not be of much weight. I would suggest that, if the decision of the School Board be against you, and if such decision be final and not subject to review, you should, without delay, bring the matter before the Privy Council, whose views upon the subject you will find have been already very explicitly stated in a circular addressed to H. M. School Inspectors in Scotland in the beginning of last year and published in the Scotsman Newspaper. From this document I make the following extract. 'In the absence of any express provision to that effect, 'my Lords presume that it was not the intention of the Legisla-'ture that the Act of 1872 (the Education Act, Scotland) should 'override the Factory Acts; nor, unless the case had occurred, 'would they have thought it likely that a board, which found a 'child going regularly to school and to work under a Half-time 'Act, would threaten proceedings against the parent under 'section 70 of the Act of 1872, which proceedings must be taken 'on the ground that he is grossly and without reasonable excuse 'failing to discharge the duty of providing elementary education 'for his child or children. In like manner they would imagine 'that an employer would not be held by a school board to be 'liable to be proceeded against (under section 72) if a child in 'his service were at the same time receiving regular instruction 'at school.'

"It would thus appear that the course pursued by your School Board was not anticipated, and is entirely opposed to the views of the Privy Council. I am therefore inclined to think that, on a representation of the circumstances being made to them, the Privy Council would take measures to make it compulsory on

school boards to recognise the attendance of children at school under the Half-time Acts as a sufficient compliance with the requirements of the Scotch Education Act, in accordance with the rule which I believe is uniformly adopted in England, and also, with one or two exceptions, in Scotland.

"If the authorities in Scotland would provide the same excellent public schools as have been established in the manufacturing districts in Lancashire and the West Riding of Yorkshire, at all of which half-time children are freely admitted without let or hindrance, they would find that the half-time system is not so much in fault as the very inadequate means which, in many instances, have been adopted in Scotland for the purpose of carrying that system into effect.

"I am, &c.,

(Signed) DANIEL WALKER.

"Messrs. J. & H. Brown & Co."

I was afterwards informed by the Selkirk millowners that the School Board had raised a case for the purpose of trying the question before the sheriff. The person proceeded against was Thomas Laidlaw, mill-worker, Selkirk, who had two children, twins, between 11 and 12 years of age at work as half-timers, Laidlaw having a family of 12, the youngest only three years old. The case was fully argued by lawyers on either side, and after bestowing great attention upon it, the sheriff substitute, in a long explanatory written judgment, decided that Laidlaw was "not guilty of "the charge of neglecting to provide elementary education "for his children."

I trust therefore that this decision, the soundness of which I have never heard called in question, will establish the claims of half-time children to be admitted as freely to the public schools in Scotland as they are to those in England.

Jute Manufacture.

I am sorry to inform you that the jute manufacturing trade, which has in recent years become the staple trade of the Dundee district, is at present, and has for the last 18 months or two years been very much depressed. As yet only a very few factories have entirely stopped; but partial stoppages of machinery, amounting in some instances to one third or one half, are very numerous, while other establishments are running short time. In point of fact, in nearly every instance, whether as respects spinning or weaving factories, but especially the former, where actual stoppage has not been resorted to, an extensive curtailment of production has, in one way or other, taken place.

This untoward condition of the jute trade is all the more striking, in so far as it is the only serious reverse it has sustained for many years. It is attributed, in some measure, to the great increase of jute factories in this country and on the continent, as well as in America and India. The working hours on the continent and in America are much longer than ours; and in the India factories the mode of working differs materially from that adopted in this country, owing, it may happen, partly to the abundance of cheap labour and partly to the effects of climate. In Bengal, where alone the jute plant is cultivated, jute spinning and weaving factories have of late been established with great rapidity. Three or four years ago only four such establishments there existed, whereas now there are 14 either in actual operation or in progress of erection, aggregating about 60,000 spindles and 4,000 looms, and capable of producing annually at least 30,000 tons of manufactured goods, almost entirely of the coarsest description. This enormous production must, for a time at least, operate prejudicially to the manufacture of like fabrics in this country. And it is to be dreaded that, while in this country, as compared with India, labour and raw material are more expensive, the trade, so for as regards its coarsest branches, may be diverted from this district. I may mention that in India two sets of hands are employed, the one working eight, the other four hours a day, and so alternating. The machinery is thus run 12 hours a day or 72 hours a week, just 16 hours a week longer than in this country. The Calcutta jute manufacturers have a complete monopoly of their own home markets, as well as of those of the Eastern Archipelago, including Singapore, Penang, &c., with which and Calcutta there is frequent and regular communication. Looking, therefore, at the advantages which they possess in the ample command of cheap labour, now becoming trained and skilful, and in being able to procure the raw material at least 30 per cent. cheaper than we, it is feared by persons conversant with the trade—not alarmists, but intelligent mercantile men—that the time is not remote when our Indian manufacturers will become formidable rivals to their brethren in this country.

Woollen Manufactures.

I regret to mention that the recent failures in London have fallen heavily on several woollen manufacturers in the south of Scotland, and some firms of the highest standing have been obliged to call meetings of their creditors. It is

understood, however, that the works will be carried on as usual, thus affording the same employment to their numerous workpeople, and without injuring to any material extent the general trade of the district.

I subjoin copy of a letter I have received from Mr. Rickards, inclosing one addressed to him by Mr. W. Farrer Ecroyd, of the firm of Messrs. Wm. Ecroyd and Sons of Lomeshaye, near Burnley. You may probably be acquainted with Mr. Ecroyd, and therefore able to appreciate the value which attaches to any opinion he may express, either in regard to our manufactures or the social position of our manufacturing population.

"DEAR SIR, Leeds, 9th July 1875.

"HAVING had frequent opportunities of hearing the opinions of the manufacturers and operatives respecting the working of the Factory Act, 1874, and knowing the disfavour with which the Act is viewed by both parties in the woollen, worsted, and cotton factories of my district, I beg to enclose you the copy of a letter on the subject which I have received from Mr. W. F. Ecroyd of Lomeshaye, near Burnley, whose firm employs a large number of hands in worsted weaving. Mr. Ecroyd has given me permission to send you a copy of his letter.

"I am, &c.,

"(Signed) GEO. H. L. RICKARDS.

"Daniel Waker, Esq."

"Spring Cottage, Burnley.

DEAR SIR, 4th June 1875.

"I AM sorry I happened to be away from home on the occasion of your visit to our works the other day.

"As an old and sincere supporter of the factory laws, and as one who takes a deep interest in the physical and moral well-being of the workers, and who has spent much time, thought, and money to promote it, I may perhaps claim a hearing on the merits of the recent Act, all the more since it was passed by the political party to which I adhere; and my conviction is that no measure more injurious to the permanent prosperity and well-being of the English factory workers, so far as it extends, could have been devised.

"Our best families, the pick of the population, disapproved of it, though it is impossible for them, in their position, to take up an attitude of opposition to a measure containing provisions apparently calculated to add to the ease and enjoyment of their own class.

"They fear, and with most solid reason, this added influence to the temptations which already surrounded their young people, full of money, full of leisure, and freed from discipline and control by the demand existing for juvenile labour.

"The earnings of our piece-work hands have fallen off in proportion to the reduction of hours, in spite of a short-lived spurt

just at first. We knew it must be so, as the speed of machinery had already been pushed to the farthest extent, and lowered from a point which had been attempted but found unprofitable and injurious to the work. The real evil has long been, not too long hours, but too great tension of the nervous system by aiming at a larger earning, and, consequently, the charge of more machinery than is consistent with health or with good work either. Hence also an increase of irritating conflict between master and man as to the excellence of workmanship, or, still worse and still more frequent, a gradual lapse to a lower standard, and the consequent superior perfection of French or other foreign goods.

"At the same time, the difference, now so great between French hours and wages of factory labour and ours, is weakening us rapidly in competition, and leading to more and more mischievous attempts (mere drowning struggles), to get more out of our limited hours and dear labour than can be got fairly or well.

"Far better 60 hours a week and less of this sad unnatural strain; for over-tension may kill in 50 hours a week, and reasonable work not injure in 60. What with these evils, and the effect of hostile tariffs, foreign and colonial, the out-look is enough to dismay the ablest and the strongest employers, and the further and artificial scarcity of labour created by the recent Act, is only driving the good ship faster upon the rocks that were so plain ahead before. In our own trade (the manufacture of goods from Australian wool), it is noticeable from the reports of the London sales on one hand, and from the distribution of orders this season between English and French manufacturing houses, that, in spite of all our efforts, the French, through longer hours and lower wages, and far more patient and tractable labour, are simultaneously taking from us a large slice of our wool and of our orders. It is no use pointing to the superior variety and attractiveness of their goods as the cause. This is merely one of the making of the artificial restrictions thrown around us, which are effects labourers so scarce and dear, and so unwilling to take pains with anything new or troublesome, that we are more and more precluded from all higher enterprise.

"I am, &c.,

"G. W. L. Rickards, Esq. (Signed) W. Farrer Ecroyd."

I have, &c.,

Alex. Redgrave, Esq., Daniel Walker.
H.M. Inspector of Factories.

Appendix No. 2.

Return of Prosecutions for Offences against the Factories and Workshops Regulation Acts, &c., in the District of Alexander Redgrave, Esq., for the Six Months ended 30th April 1875.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence	Amount of Penalty.	Amount of Costs.	Remarks.
1874.			*In the Sub-Inspectorship of Mr. Rickards.*	£ s. d.	£ s. d.	
Dec. 24	Wm. Bland, of Idle - -	Lt.-Col. Pollard and W. H. Ripley, Esq., Court House, Bradford.	Employing two children and six young persons more than seven working days without surgical certificate.	6 0 0	2 6 6	Five cases withdrawn on payment of costs.
„	G. Garnett and Sons, of Apperley.	„ „	Employing a young person after 6 p.m. - -	1 0 0	0 17 6	
Nov. 27	Patrick Cooney, as the parent of Thos. Cooney.	John Craven and John Brigg, Esqs., Keighley.	Permitting his son, Thomas Cooney, to be employed more than 6½ hours per diem.	0 5 0	0 12 0	Defendant forged a certificate of baptism so as to get his son passed for full time, though under 13.
„	„ „	„ „	Neglecting to cause the said Thos. Cooney to attend school.	0 5 0	0 9 6	
1875. Mar. 22	Michael Hardiman, parent	The Lord Mayor, and Messrs. March and Wade, Justices, Guildhall, York.	Permitting his son, aged 11, to be employed more than 6½ hours.	- -	0 14 6	Withdrawn on payment of costs.
April 5	William Smith, the parent	John V. Godwin and Joshua Pollard, Esqs., Bradford.	Permitting his son, aged 12, to be employed more than 6½ hours.	0 10 0	0 10 6	
„	„ „	„ „	Neglecting to cause his said son to attend school -	- -	- -	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty. £	s.	d.	Amount of Costs. £	s.	d.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Rickards*—cont.							
April 5	Abraham Barrett, the parent.	John V. Godwin and Joshua Pollard, Esqs., Bradford.	Permitting his daughter, aged 12, to be employed more than 6½ hours.	0	5	0	0	10	6	
"	" "	" "	Neglecting to cause his said daughter to attend school.	-		-	-		-	Withdrawn on payment of costs.
" 9	Thos. Slater, spinner -	T. H. Travis, Esq., S.M., Hull.	Employing a child more than 6½ hours - -	1	0	0	0	9	0	The parent of the boy being a widow was not prosecuted.
"	" "	" "	Employing the same without school certificate -	1	0	0	0	9	0	
" 16	Thomas Crane, the parent	W. Ferrand, John Craven, John Brigg, and Joseph Craven, Esqs., Keighley.	Neglecting to cause his son to attend school -	0	5	0	0	9	6	
			In the Sub-Inspectorship of Mr. Oram.							
Jan. 5	Luigi Corti - -	William M. Cooke, Esq., Stipendiary Magistrate, Clerkenwell Police Court.	For employing a child under 13 years of age after 8 o'clock at night on the 21st December 1874.	1	0	0	0	4	0	
"	" "	" "	For employing a child under 13 years of age before 6 o'clock in the morning on the 22nd December 1874.	1	0	0	0	4	0	
Feb. 9	William Langer, 40, Ben Jonson Road, Stepney.	F. Lushington, Esq., Thames Police Court.	Employing two young persons during the night -	2	0	0	0	4	0	
"	" "	" "	Employing two young persons on Sunday - -	2	0	0	0	4	0	
Mar. 1	H. M. Pollett - -	Alderman Cotton, M.P., Guildhall, London.	Employing a young person after 2 p.m. on Saturday	1	0	0	0	2	0	
"	H. Wand - -	" "	Employing a young person after 2 p.m. on Saturday	1	0	0	0	2	0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Lakeman.*	£ s. d.	£ s. d.	
Dec. 31	Joseph Merrell, letter-press printer, Bury St. Edmunds.	G. Thompson, Esq., the Mayor, H. Le Grice, Esq., and five others, Guildhall, Bury.	Having employed a child in a letter-press printing factory without registering the name of said child.	2 0 0	0 15 0	
"	" "	" "	Having employed the said child without surgical certificate.	2 0 0	0 18 6	
"	" "	" "	Having employed the said child before noon and after one of the clock on the same day.	1 0 0	0 8 0	
"	" "	" "	Having neglected to send the child to school -	1 0 0	0 8 0	
	Henry McMinnies, tailor, Eastgate Street, Bury St. Edmunds.	" "	Having permitted the illegal employment of his child Joseph in the letter-press printing factory of Joseph Merrell, Bury St. Edmunds.	- -	0 5 6	On account of poverty no fine was inflicted; costs to be paid by Defendant.
"	"	" "	Having failed to send his child Joseph to school, the said boy having been employed in the letter-press printing factory of Joseph Merrell, Bury St. Edmunds.	- -	0 5 6	On account of poverty no fine was inflicted; costs to be paid by Defendant.
1875. Jan. 1	Messrs. Metcalfe and Son, letter-press printers, Cambridge.	The Mayor, J. Wentworth, Esq., and three others, Town Hall, Cambridge.	Having employed a child in a letter-press printing factory without registering the name of the said child.	2 0 0	1 8 6	
"	"	" "	Having employed the said child without a surgical certificate.	2 0 0	1 5 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Jan. 1	Messrs. Metcalfe and Son, letter-press printers, Cambridge.	The Mayor, J. Wentworth, Esq., and three others, Town Hall, Cambridge.	Having employed the said child before noon and after one of the clock on the same day.	- -	0 10 0	Withdrawn by desire of the Bench, upon payment of costs.
"	" "	" "	Having neglected to send the child to school	- -	0 10 0	Withdrawn by desire of the Bench, upon payment of costs.
	John Cowles, groom, Cambridge.	" "	For that he, being the parent of one Samuel Cowles, employed in the letter-press printing factory of Messrs. Metcalfe and Son, Cambridge, did unlawfully permit his child to work before noon and after one of the clock on the same day.	0 5 0	0 8 0	
"	" "	" "	And also for wilfully failing to cause his child afore-named to attend school.	0 5 0	0 8 0	
" 6	Robert Westaway, ship builder, Lowestoft.	Rev. Richd. Cooke Denny and Wm. Woodthorpe, Esq.	Having employed on the 28th October a child under the age of 13 years for more than 6½ hours.	Dismissed.	0 16 0	It was proved that the child had been regularly at the works for twelve months, from morning to night. That he assisted the ship builders each day, and was found by me sawing a plank for the boat builder with whom he was working. The child's evidence was very plain, but the ship builder gave un-

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Jan. 6	Robert Westaway, ship builder, Lowestoft.	Rev. Richd. Cooke Denny and Wm. Woodthorpe, Esq.	Having employed the same child for more than 14 days, and did not procure a certificate of school attendance.	Dismissed.	0 8 0	satisfactory evidence, and had forgotten all but that the child was an errand boy only. The Bench ruled that as so young a boy could be of no use in a ship builder's yard, they believed that he was employed as an errand boy.
,,	Frederick A. Larke, Lowestoft.	,, ,,	Having permitted the illegal employment of his child as above mentioned.	Dismissed.	0 6 6	Not heard in consequence of dismissals above.
,,	,, ,,	,, ,,	Having wilfully failed to send his child to school.	Dismissed.	0 6 6	
,, 12	Susan Downs, straw plaiting occupier, Sible Hedingham, Essex.	N. C. Barnardiston, Esq., L. A. Majendie, Esq., Rev. W. K. Borton, and three others, Police Court, Castle Hedingham.	Having employed a child in the handicraft of straw plaiting for more than 14 days without school certificates.	0 0 6	0 13 0	The Bench recommended that the costs in each case be paid by the Crown, in consequence of the poverty of the Defendants.
,,	,, ,,	,, ,,	Having employed a child in the handicraft of straw plaiting for more than 14 days without school certificates.	0 0 6	0 13 0	
,,	,, ,,	,, ,,	Having employed a child under the age of eight years in the handicraft of straw plaiting.	0 0 6	0 13 0	

RETURN OF PROSECUTIONS—*continued*.

Date	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
			In the Sub-Inspectorship of Mr. Lakeman—cont.	£ s. d.	£ s. d.	
1875. Jan. 12	William Britton, farm labourer, Sible Hedingham.	N. C. Barnardiston, Esq., L. A. Majendie, Esq., Rev. W. K. Borton, and three others, Police Court, Castle Hedingham.	Being the parent of, and deriving direct benefit from the labour of his child, did permit her to be employed without sending her to school.	0 0 6	0 8 0	The Bench recommended that the costs in each case be paid by the Crown, in consequence of the poverty of the Defendants.
"	" "	" "	Being the parent of, and deriving direct benefit from the labour of his child, did permit her to be employed in straw plaiting under the age of eight years.	0 0 6	0 8 0	
"	William Gibbons, farm labourer, Sible Hedingham.	" "	Being the parent of, and deriving direct benefit from the labour of his child, did permit her to be employed in straw plaiting without sending her to school.	0 0 6	0 8 0	
Jan. 19	The Maldon Iron Works Company, Limited, Maldon, Essex.	Dr. May, Mayor, Rev. E. R. Horwood, W. Humpherys, Esq., and others, Town Hall, Maldon.	Having employed a young person on Saturday the 5th December last after two of the clock in the afternoon, to wit, till 4 o'clock.	1 5 0	0 16 4	The Mayor was pleased to add that as this was the first prosecution in Maldon under the Factory Acts, a lenient view would be taken in favour of Defendants; but in any future prosecutions of a wilful violation of the law, the Bench would inflict the highest penalty.
"	" "	" "	Having employed a second young person in like manner on the same day.	1 5 0	0 16 4	
"	" "	" "	Having employed a third young person in like manner on the same day.	1 5 0	0 16 4	
"	" "	" "	Having employed a fourth young person in like manner on the same day.	1 5 0	0 16 4	
"	" "	" "	Having employed a fifth young person in like manner on the same day.	1 5 0	0 16 4	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Lakeman*—cont.	£ s. d.	£ s. d.	
Jan. 12	The Maldon Iron Works Company, Limited, Maldon, Essex.	Dr. May, Mayor, Rev. E. R. Horwood, W. Humpherys, Esq., and others, Town Hall, Maldon.	Having employed a young person on Monday the 7th December last after six of the clock in the evening, to wit, till 8 p.m.	1 5 0	0 16 4	
"	" "	" "	Having employed a second young person in like manner on the said day.	1 5 0	0 16 4	
"	" "	" "	Having employed a third young person in like manner on the said day.	1 5 0	0 16 4	
"	" "	" "	Having employed a fourth young person in like manner on the said day.	1 5 0	0 16 4	
April 29	Alfred Hulme, manager to executors of S. Brown, silk factory.	D. Eve Burroughes and S. B. Chapman, Esqs., Town Hall, Ipswich.	For not having limewashed the factory within 14 months.	3 0 0	0 17 0	
			In the Sub-Inspectorship of Mr. Oswald.			
" 7	Thomas Beresford, parent, York Street, Nottingham.	J. H. Lee, D. New, and H. Taylor, Esqs., Guild Hall, Nottingham.	Allowing his son to be employed both before noon and after 1 o'clock in the afternoon of the same day.	0 5 0	0 10 0	Penalty only asked for in one case.
"	" "	" "	Neglecting to cause his child to attend school -	- -	- -	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Gould.*	£ s. d.	£ s. d.	
Nov. 19	Shaw and Fisher, electro-plate manufacturers.	Alderman Hallam and — Stevenson, Esq., Town Hall, Sheffield.	Employing young person without registering name.	1 0 0	1 14 6	
"	" "	" "	Employing same young person without surgical certificate.			
"	" "	" "	Employing young person without registering name.			
"	" "	" "	Employing same young person without surgical certificate.	- -	3 2 0	Withdrawn on payment of costs.
"	" "	" "	Employing young person without registering name.			
"	" "	" "	Employing same young person without surgical certificate.			
Dec. 9	Wm. Gallimore, electro-plate manufacturer.	Thos. Jessop and W. E. Laycock, Esqs., Town Hall, Sheffield.	Employing a young person during the night -	2 0 0	0 10 0	
"	" "	" "	Employing a young person during the night -	- -	0 7 6	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Thornhill.*	£ s. d.	£ s. d.	
Jan. 23	Messrs. Pipes and Yeates, timber merchants, &c.	The Mayor (G. Holme), and F. Longdon, Esq., Town Hall, Derby.	Emloying a child without school certificate -	2 0 0	0 12 0	
"	" "	" "	Employing same child without surgical certificate			
"	" "	" "	Employing same child without registering the name on first day of employment.	- -	0 16 6	Withdrawn on payment of costs.
"	" "	" "	Employing a young person without surgical certificate.			
"	John Shaw, father of above-named child.	" "	For neglecting to cause his child to attend school -	- -	0 4 0	Withdrawn on payment of costs.
" 22	W. and A. Bates, india-rubber manufacturers, St. Mary's Mills, Leicester.	C. Harding (the Mayor), and J. Stafford, Esq., Town Hall, Leicester.	Employing a child without school certificate -	1 0 0	0 7 0	
"	" "	" "	Employing three children without surgical certificates.			
"	" "	" "	Employing two young persons without surgical certificates.	- -	0 17 6	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Saurin.*	£ s. d.	£ s. d.	
Dec. 22	A. Matheson & Co., silk mercers, George Street, Edinburgh.	G. A. Maclaren and John Cowan, Esqs., County Buildings, Edinburgh.	Employing six females after 4 p.m. on Saturday the 7th of November.	6 0 0	1 1 6	
			In the Sub-Inspectorship of Sir Wm. Chaytor.			
1875.						
—	Robert Jackson - -	Major Allison, W. H. Richardson, and A. Leslie, Esqs., Jarrow-on-Tyne.	Employing a child before noon and after 1 o'clock on the afternoon of the same day.	- -	0 12 0	Defendants pleaded guilty. The case was proved, but dismissed by the Magistrates, Defendant paying costs.
—	" "	" "	Employing a child without a school certificate -	- -	0 5 0	
Mar. 22	G. Patterson - -	G. Charlton (Mayor), R. S. Newall, H. Milmain, and W. Galloway, Esqs., Gateshead.	Employing a child before noon and after 1 p.m. on 11th February 1875.	1 0 0	0 6 0	
"	" "	" "	Employing a child without a school certificate -	1 0 0	0 6 0	
			In the Sub-Inspectorship of Mr. Osborn.			
" 3	James Collinge, milliner, St. James Street, Burnley.	John Massey and John H. Scott, Esqs., Burnley.	Employing females after 9 p.m. - - -	0 10 0	1 9 6	Two cases withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
Mar.	Varley and Pomfret, cotton spinners, Burnley.	John Massey and John H. Scott, Esqs., Burnley.	Employing females and young persons during a meal hour.	1 0 0	1 17 6	Three cases withdrawn on payment of costs.
„	Fulton and Slater, cotton manufacturers, Spring Gardens, Burnley.	„ „	Employing females during a meal hour - -	1 0 0	1 9 6	Two cases withdrawn on payment of costs.
„	Wilkinson and Altham, cotton manufacturers, Stoneyholme, Burnley.	„ „	Employing females during a meal hour - -	1 0 0	1 9 6	Two cases withdrawn on payment of costs.
„	J. and M. Kippax, cotton spinners, Salford Mill, Burnley.	„ „	Employing females during a meal hour - -	1 0 0	2 5 6	Four cases withdrawn on payment of costs.
„	John Sagar, cotton manufacturer, Burnley.	„ „	Employing females during a meal hour - -	1 0 0	2 13 6	Five cases withdrawn on payment of costs.
„ 4	Simeon Lord and Sons, woollen finishers, &c., Norden.	R. Hurst and J. Brierley, Esqs., Town Hall, Rochdale.	Employing a child without school certificates of attendance for several weeks.	1 0 0	0 11 0	
„ 5	The Hamer Hall Cotton Spinning Company.	„ „	1. Employing one Jane Halkyard before 6 a.m. -	1 0 0	0 15 6	
„	„ „	„ „	2. Employing one J. A. Bamford before 6 a.m. -	1 0 0	0 15 6	
„	„ „	„ „	3. Employing one J. W. Dawson before 6 a.m. -	1 0 0	0 15 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
Mar. 5	The Hamer Hall Cotton Spinning Company.	R. Hurst and J. Brierley, Esqs., Town Hall, Rochdale.	4. Employing one John Ashworth before 6 a.m. -	- -	0 11 0	Withdrawn on payment of costs.
"	" "	" "	5. Employing one Hiram Fielding before 6 a.m. -	- -	0 11 0	
"	Wm. T. Heyworth, cotton manufacturer, Molesworth Street, Rochdale.	" "	1. Employing one S. E. Sutcliffe after 5.30 p.m. -	1 0 0	0 10 0	
"	" "	" "	2. Employing one E. A. Booth after 5.30 p.m. -	1 0 0	0 10 0	
"	" "	" "	3. Employing one Eliza Smith after 5.30 p.m. -	1 0 0	0 10 0	
"	" "	" "	4. Employing one Emma Fitton after 5.30 p.m. -	- -	0 5 6	Withdrawn on payment of costs.
"	" "	" "	5. Employing one Betty Ogden after 5.30 p.m. -	- -	0 5 6	
"	" "	" "	6. Employing one Ann Broxup after 5.30 p.m. -	- -	0 5 6	
" 17	Messrs. Smethurst and Parkyn, Moss Mills, Shaw.	H. Whitaker and A. Leach, M.D., Esqs., Royton.	Employing four females during the dinner hour -	4 0 0	3 18 0	Two cases withdrawn on payment of costs.
April 19	H. Whitaker and Sons, cotton spinners, Royton.	Abraham Leach and Joshua Crompton, Esqs., Royton.	Employing females during the dinner hour - -	5 0 0	4 12 6	Two cases withdrawn on payment of costs.
" 21	Messrs. J. and J. Vellers, cotton spinners, Healey Royd, Burnley.	John Massey and John Hargreaves Scott, Esqs., Burnley.	Employing females after 5.30 p.m., being part of the time which should be allowed for meals.	1 0 0	3 13 0	Seven cases withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Osborn*—cont.	£ s. d.	£ s. d.	
April 28	William Dagdale, cotton manufacturer, Ashfield, Burnley.	John Massey and John Hargreaves Scott, Esqs., Burnley.	Employing females and young persons during a meal hour.	1 0 0	3 2 6	Seven cases withdrawn on payment of costs.
„ 23	Townhead Mill Company, cotton spinners, Rochdale.	E. Ashworth, C. Whitaker, and H. H. Fishwick, Esqs., Town Hall, Rochdale.	Allowing females to remain in a room where a manufacturing process was being carried on after 5.30 p.m., being part of the two hours required to be given for meals and rest.	- -	5 14 0	Case dismissed, Justices of opinion no illegality had taken place; the engine-tenter stating the engine was stopped by 3½ minutes after 5.30 by the engine-house clock; the time by the public clock was 5.36. Bench, however, recommended the engine should be stopped in time in future.
„	Mrs. Rigg, milliner, Drake Street, Rochdale.	„ „	Employing females after 9 p.m. - - -	0 5 0	2 14 6	Three cases withdrawn on payment of costs.
1874.			*In the Sub-Inspectorship of Mr. Beaumont.*			
Nov. 5	Michael Sullivan - -	Colonel Pollard and H. W. Ripley, Esq., M.P., Bradford.	Neglecting to cause his child Michael Sullivan to attend school.	- -	0 9 6	No penalty inflicted, but Defendants to pay costs. These people are very poor. The case against Michl. Grogan was adjourned to see if the certificate of birth of Ellen Grogan could be produced.
„	Michael Grogan - - Mary Rogers - - - William McCabe - Patrick O'Neile - -	„ „	The same as to Mary Rogers, William McCabe, and Patrick O'Neile.	- - - - -	- 0 9 6 0 9 6 0 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Beaumont*—cont.	£ s. d.	£ s. d.	
Nov. 5	Samuel Rhodes - -	Colonel Pollard and J. Pollard, Esq., Bradford.	Employing in a brickyard a child more than 6½ hours of September 29th, and without a school certificate.	1 0 0	1 15 0	
Dec. 4	Thos. Feather & Co., Liversedge.	W. Blakeley and C. Wheatley, Esqs., Dewsbury.	Employing three children before noon and after 1 o'clock of the same day, and without certificate of school attendance.	2 0 0	1 8 6	Four cases withdrawn on payment of costs.
„ 17	B. Ingle & Co., Percy Oaks Mill, Bradford.	Colonel Pollard and J. Pollard, Esq., Bradford.	Employing three children before noon and after 1 o'clock of November 9th without school certificates, and not having their names on the register.	1 0 0	1 1 0	Five cases withdrawn on payment of costs.
„ 18	Geo. Tattersfield & Co., Oaklands Mill, Mirfield.	W. Blakeley and R. Ellis, Esqs., Dewsbury.	Employing a child, Henry Hollingworth, before noon and after 1 o'clock of October 23rd without having placed his name on the register, and without surgical certificate.	5 0 0	1 4 6	
„	Jas. Fearnsides, Batley -	„ „	Employing a child on Saturday evening November 14th on a letter-press printing machine after 4 p.m.	1 0 0	0 10 0	
„	J. K. Lurm, Batley - -	„ „	Employing Ellen Drake, a milliner, at 11 p.m. on Saturday night the 7th November.	0 10 0	0 8 0	
1875. Mar. 1	Edward White - - -	Colonel Pollard and W. Ackroyd, Esq., Bradford.	Not causing his child Ann White to attend school	0 5 0	0 9 6	
„ 8	Messrs. Avison Bros., Batley.	J. Crowther and W. Baline, Esqs., Dewsbury.	Employing three young persons without having registered their names.	6 0 0	1 10 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Beaumont*—cont.	£ s. d.	£ s. d.	
Mar. 8	Messrs. Avison Bros., Batley.	J. Crowther and W. Baline, Esqs., Dewsbury.	Neglecting to limewash their premises within the required time.	5 0 0	1 0 0	
Jan. 8	Geo. Johnson, Victoria Mill, Horbury.	Percy Tew, Esq., and Major Barker, Wakefield.	Employing two children before noon and after 1 o'clock of November 26th, without surgical certificate, without certificate of school attendance, and not having their names entered on register. (One case withdrawn).	9 0 0	1 7 0	
"	Geo. Bowers (parent), Victoria Mill, Horbury.	" "	Employing his two children and not causing them to attend school.	1 0 0	0 8 0	
"	Lonsdale and Tawson, Coxley Mill, Horbury.	" "	Employing a young person during the dinner hour of November 26th.	2 0 0	0 12 0	
April 16	J. W. Priestley, Liversedge.	J. B. Greenwood and W. Blakeley, Esqs., Dewsbury.	Employing a child, Thomas Parkinson, not having a surgeon's certificate, and before noon and after 1 o'clock of the same day.	2 0 0	0 15 6	The latter case withdrawn on the payment of costs.
"	Joseph Parkinson, Gomersal.	" "	Employing his child, Thomas Parkinson, without certificate of school attendance.	0 10 0	0 7 0	
"	John Simkinson, Liversedge.	" "	Employing his child, Walter Simkinson, not having obtained a certificate of school attendance.	0 5 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave.*	£ s. d.	£ s. d.	
Nov. 21	William and Christopher Larter, rope and twine manufacturers, Kent Street, Borough, and Lock's Fields, S.E.	—Ellison, Esq., Lambeth Police Court.	Neglecting to obtain a school certificate for Frederick Julian, a child under 13 years of age employed in their ropeground.	0 2 6	0 4 0	The Defendants promised the utmost attention to the law in future, and to assist the Sub-Inspector in every way. They also contributed a guinea to the poor-box.
,,	,, ,,	,,	Being the occupiers of the ropeground in which such child was employed without attending school.	0 2 6	0 4 0	
,,	,, ,,	,, ,,	Neglecting to obtain a school certificate for Edward Gould, a child under 13 years of age employed in their ropeground.	- -	0 4 0	
,,	,, ,,	,, ,,	Being the occupiers of the ropeground in which such child was employed without attending school.	- -	0 4 0	Withdrawn on payment of costs.
,,	Wm. Dodd - -	,, ,,	Not causing his child to attend school while employed in the ropeground.	- -	0 2 0	
,,	John Julian - - -	,, ,,	Not causing his child to attend school while employed in the ropeground.	0 0 6	0 2 0	
,,	James Gould - -	,, ,,	Not causing his child to attend school while employed in the ropeground.	0 2 6	0 2 0	
,,	Anne Knyvett - - -	,, ,,	Not causing her child to attend school while employed in the ropeground.	- -	0 2 0	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
Nov. 21	Wm. Acklang - -	— Ellison, Esq., Lambeth Police Court.	Not causing his child to attend school while employed in the ropeground.	- -	0 2 0	Withdrawn on payment of costs.
„ 23	James Philips, rope and twine manufacturer, New Road, Rotherhithe, and Union Street, Borough, S.E.	J. Patteson, Esq., Greenwich Police Court.	Neglecting to obtain a school certificate for Emma Whittler, a child under 13 years of age employed in his ropeground.	0 5 0	0 2 0	
„	„ „	„ „	Being the occupier of the ropeground wherein such child was employed without attending school.	0 5 0	0 2 0	
„	„ „	„ „	Neglecting to obtain a school certificate for Harry Denmore, a child under 13 years of age employed in his ropeground.	- -	0 2 0	
„	„ „	„ „	Being the occupier of the ropeground wherein such child was employed without attending school.	- -	0 2 0	Withdrawn on payment of costs.
„	„ „	„ „	Neglecting to obtain a school certificate, &c. -	- -	0 2 0	
„	„ „	„ „	Neglecting to obtain a school certificate, &c. -	- -	0 2 0	
„	„ „	„ „	Neglecting to obtain a school certificate, &c. -	- -	0 2 0	
„	John R. Denmore -	„ „	Not causing his child to attend school while employed in the ropeground.	0 1 0	0 2 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave*—cont.	£ s. d.	£ s. d.	
Nov. 23	Giles Whittler - -	J. Patteson, Esq., Greenwich Police Court.	Not causing his child to attend school while employed in the ropeground.	0 1 0	0 2 0	
			Offences against Workshop Regulation Act.			
Dec. 7	Stidolph and Doidge, sweetstuff makers, Bermondsey New Road.	—Partridge, Esq., Southwark Police Court.	Not obtaining a certificate of school attendance for Edward Taylor, a child employed in their works.	0 2 0	0 6 0	
"	" "	" "	Being the occupier of a workshop in which Edward Taylor was employed without attending school.	0 2 0		
"	Samuel Taylor, 1, Bermondsey Buildings.	" "	Not causing his child Edward Taylor to attend school while employed as above.	0 2 0	0 2 0	
" 12	A. J. Hawkes, dressmaker, 60, Old Steine, Brighton.	Arthur Bigge, Esq. (Stipendiary), and a full Bench, Town Hall, Brighton.	Employing a woman after 2 p.m. on Saturday 5th instant.	0 10 0	1 1 6	
"	" "	" "	Employing a woman after 2 p.m. on Saturday 5th instant.	- -		Withdrawn on payment of costs.
"	Allen Fry, dressmaker, East Street, Brighton.	" "	Employing a woman after 2 p.m. on Saturday 5th instant.	0 10 0	1 1 6	
"	" "	" "	Employing a woman after 2 p.m. on Saturday 5th instant.	- -		Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
Dec. 21	George Smeed, brick manufacturer, Sittingbourne.	Rev. G. Moore and W. Walter, Esq., Sittingbourne.	Employing a child on the 10th June last without procuring a certificate of school attendance.	1 0 0	0 9 0	Adjourned from 15th June last for Mr. Smeed to obtain opinion of Queen's Bench as to his conviction on that date. This he failed to do.
"	" "	" "	Employing a child on the 10th June last without procuring a certificate of school attendance.	1 0 0	0 9 0	
"	Brenchley - - -	" "	Not causing his child to attend school while employed in Mr. Smeed's brickfields.	- -	0 9 0	Withdrawn on payment of costs.
"	Mirams - - - -	" "	Not causing his child to attend school while employed in Mr. Smeed's brickfields.	- -	0 9 0	
1875.						
Feb. 12	Robert Isted, firewood cutter.	— Ellison, Esq., Lambeth Police Court.	Not causing his child to attend school - -	0 5 0	0 5 0	
"	" "	" "	Allowing his child to be employed both before and after noon.	0 5 0	0 5 0	
Mar. 22	William Layson, firewood dealer, Deptford.	— Patteson, Esq., Greenwich Police Court.	Not procuring a certificate of school attendance of a child.	0 5 0	0 6 0	
"	" "	" "	Being the occupier of a workshop wherein a child was illegally employed.	0 5 0		
"	John Liddell - - -	" "	Not causing his child to attend school while employed in Layson's workshop.	0 2 6	0 2 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. J. A. Redgrave—cont.*	£ s. d.	£ s. d.	
April 23	Jacobs Brothers, furriers, Surrey Row, Blackfriars.	W. Partridge, Esq.	Employing a woman on Good Friday	2 0 0	0 2 0	
"	" "	" "	Nineteen similar cases	- -	2 4 0	Withdrawn on payment of costs.
			In the Sub-Inspectorship of Mr. Kindersley.			
1874. Dec. 28	William Mullin	Alex. Young and Patrick Dougall, Esqs., County Buildings, Glasgow.	1st. Allowing his son, 12 years of age, to be employed in Messrs. John Robertson & Co.'s cotton mill, Bridgeton, Glasgow, for more than 6½ hours in one day.	0 10 6		As the Defendant had aggravated the offence by altering the date of the birth certificate of his son, the Magistrates inflicted a fine of 10*s.* 6*d.* for each count in the charge, instead of the minimum penalty of 5*s.*
"	" "	" "	2nd. Allowing the same child to be employed in the said cotton mill both before noon and after one of the clock on the same day.	0 10 6	0 13 0	
"	" "	" "	3rd. Allowing the same child to be employed at the said cotton mill without causing him to attend school as required by the Act.	0 10 6		
			In the Sub-Inspectorship of Mr. Wood.			
Nov. 4	Charles Toyne, Dunstable	The Mayor (E. Lockhart, Esq.), and Dr. Hicks, Town Hall, Dunstable.	For employing a child without having obtained a school certificate for the preceding week.	0 1 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Nov. 7	Henry Perrin, blacksmith, Steeple Claydon.	Hon. Percy Barrington and Sir Harry Ormby, Court House, Buckingham.	Neglecting to cause his child to attend school -	0 5 0	1 1 0	
„ 14	William Jones, Stevington	Col. Higgins and Col. Stewart, Court House, Bedford.	Employing a child without having obtained a school certificate for the foregoing week.	0 10 0	0 12 6	
„	Samuel Tysoe, Stevington	„ „	Neglecting to cause his child to attend school -	0 0 6	0 10 6	
„	William Tinsley, Stevington.	„ „	Neglecting to cause his child to attend school -	0 0 6	0 10 6	
„	John Cox, Stevington -	„ „	Neglecting to cause his child to attend school -	0 0 6	0 10 6	
„	James Saunders, Stevington.	„ „	Neglecting to cause his child to attend school -	0 0 6	0 10 6	
„	Joel Hulatt, Stevington -	„ „	Neglecting to cause his child to attend school -	0 0 6	0 8 0	
„ 19	Thos. Langley, Flitwick -	Canon Tylecote and Major Brooks, County Court Hall, Ampthill.	Neglecting to cause his child to attend school -	- -	0 8 6	As these were the first cases which have been taken before the Bench I begged that the Defendants might be discharged on paying the costs, without conviction.
„	George Chapman, Flitwick.	„ „	Neglecting to cause his child to attend school -	- -	0 8 6	
„	Thos. Short, Westoning -	„ „	Neglecting to cause his child to attend school -	- -	0 8 6	
„	Josiah Short, Westoning -	„ „	Neglecting to cause his child to attend school -	- -	0 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Nov. 19	Samuel Pedder, Westoning	Canon Tylecote and Major Brooks, County Court Hall, Ampthill.	Neglecting to cause his child to attend school -	- - -	0 8 6	
„	Jesse Short, Westoning -	„ „	Neglecting to cause his child to attend school -	- -	0 8 6	
„	Samuel Dudley, Westoning.	„ „	Neglecting to cause his child to attend school -	- -	0 8 6	
„	Amos Odell, Westoning -	„ „	Neglecting to cause his child to attend school -	- -	0 8 6	
„ 20	Chas. Truitt, Radwell -	Rd. Orlebar, Thos. Bagnall, and John Martin, Esqs., Court House, Sharnbrook.	Neglecting to cause his child to attend school -	- -	0 7 6	First case from the village. I asked that no conviction should be entered, on the Defendant paying costs.
Dec. 7	Thos. Mead, Stewkley -	Rev. T. P. Ouvry and Major Hammer, Court House, Linstade.	Employing a child without having obtained a school certificate.	0 6 0	1 1 6	
„	„ „	„ „	Employing a child without having obtained a school certificate.	0 6 0	1 1 6	
„	Edward Rowe, Stewkley -	„ „	Neglecting to cause his child to attend school -	0 6 0	1 1 6	
„	Wm. Cruise, Stewkley -	„ „	Neglecting to cause his child to attend school -	0 6 0	1 1 6	
„	Ezra Illing, Stewkley -	„ „	Neglecting to cause his child to attend school -	0 6 0	1 1 6	
„	Wm. Keasy, Stewkley -	„ „	Neglecting to cause his child to attend school -	0 6 0	0 17 6	

RETURN OF PROSECUTIONS *continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Dec. 8	John Parrott, Leighton Buzzard.	Col. Gilpin, M.P., F. Bassett, M.P., and A. Macnamara, Esq., Exchange, Leighton Buzzard.	Employing a child without having obtained a school certificate for the preceding week.	0 2 0	0 15 6	
"	" "	" "	Employing a child without having obtained a school certificate for the preceding week.	0 2 0	0 10 6	
"	Wm. Major, Leighton Buzzard.	" "	Neglecting to cause his child to attend school -	- -	0 8 6	
"	Martha Baines, Leighton Buzzard.	" "	Neglecting to cause her child to attend school -	0 5 0	0 10 6	
"	Wm. Bates, Leighton Buzzard.	" "	Neglecting to cause his child to attend school -	0 5 0	0 10 6	
"	Chas. Edmunds, Leighton Buzzard.	" "	Neglecting to cause his child to attend school -	0 2 6	0 12 6	
" 11	Edw. Robinson, Pottespury.	Rev. R. N. Russell and R. Walpole, Esq., Court House, Stony Stratford.	Employing a child without having obtained a school certificate for the preceding week.	0 5 6	0 14 6	
" 23	Gains Hillyard, Newport Pagnell.	W. G. Duncan and J. C. Maul, Esqs., Court House, Newport Pagnell.	Employing a child without having obtained a school certificate for the foregone week.	0 6 6	1 3 6	
"	Wm. Cowley, Newport Pagnell.	" "	Employing a child without having obtained a school certificate for the foregone week.	0 2 6	0 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Jan. 20	George Mayho, Aldbury -	Frank Moore, Esq., Rd. Bright, Esq., M.P., and Col. C. Dorrien, Court House, Berkhampstead.	Employing a child without having obtained a school certificate for the foregone week.	0 10 0	0 14 0	
Feb. 17	John Pickering, Dunstable	The Mayor, J. H. Limbery, and J. Gutteridge, Esqs., Town Hall, Dunstable.	Employing a woman in a workshop after 9 p.m. -	1 0 0	0 9 6	
„	„ „	„ „	Employing a woman in a workshop after 9 p.m. -	- -	0 11 6	Dismissed.
„ 20	Wm. Paradine, straw factor, Ivinghoe.	F. Moore, Esq., Court House, Ivinghoe.	For employing a child under the age of 8 years -	0 5 6	1 4 6	
„	„ „	„ „	For employing a child without having obtained a school certificate for the foregone week.	0 5 6	1 4 6	
„ 24	Wm. Green, straw cutter, Boxmoor.	Frank Moore and J. Dickinson, Esqs., Court House, Hemel Hempstead.	Employing a child without having obtained a school certificate for the foregone week.	0 0 6	0 10 0	
„	„ „	„ „	Employing a child without having obtained a school certificate for the foregone week.	0 0 6	0 11 6	
„	Jas. Pearce, Boxmoor -	„ „	Neglecting to cause his child to attend school -	0 0 1	0 7 0	
„	Solomon Gower, Boxmoor	„ „	Neglecting to cause his child to attend school -	- -	0 4 0	Withdrawn at my request, on paying costs into Court.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*In the Sub-Inspectorship of Mr. Wood*—cont.	£ s. d.	£ s. d.	
Mar. 3	Edw. G. Page, bottle envelope maker, Northchurch.	F. Moore and C. Hadden, Esqs., Court House, Berkhampstead.	Employing a child without having obtained a school certificate for the foregone week.	0 5 0	0 11 6	
"	Jno. Gamer, Northchurch, Parrut.	" "	Neglecting to cause his child to attend school -	0 1 0	0 11 6	
"	Jas. Miller, Northchurch, Parrut.	" "	Neglecting to cause his child to attend school -	0 0 6	0 7 0	
1874.			*In the Sub-Inspectorship of Mr. Woodgate.*			
Dec. 16	John Day and Sons, Moldgreen.	David Sykes (Mayor), Jere. Kaye, and Joseph Cusland, Esqs., Huddersfield.	Employing two young persons after 6 p.m. on November 23rd, 1874.	2 0 0	0 9 6	
1875. Feb. 19	Patrick Martin, Wellington Mills, Lindley.	David Sykes (Mayor), C. H. Jones, Wm. Shaw, and John Fligg Brigg, Esqs., Huddersfield.	For obstruction on the night of January 28th, by causing the lights to be put out, and locking the Sub-Inspector in the factory for some minutes when the lights were out.	40 0 0	- -	The Bench, after consulting together a few moments, gave their decision, and the Mayor said that they considered the case an exceedingly gross one, and they should fine the Defendant 40*l.*

Appendix No. 3.

In the six months ended 30th April 1875.

Table No. I.—*Fatal Accidents and Accidents arising from Machinery.*

Nature of Injury.	Adults		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.&F.
Causing death	41	5	14	4	2	2	57	11	68
Amputation of right hand or arm	5	1	3	–	2	3	10	4	14
Amputation of left hand or arm	4	–	5	–	1	–	10	–	10
Amputation of part of right hand	19	12	16	14	8	3	43	29	72
Amputation of part of left hand	22	8	18	11	3	3	43	22	65
Amputation of any part of leg or foot	5	–	1	1	1	–	7	1	8
Fracture of limbs or bones of trunk	24	4	15	–	4	–	43	4	47
Fracture of hand or foot	23	1	14	8	5	2	42	11	53
Injuries to head or face	49	12	16	10	3	2	68	24	92
Lacerations, contusions, and other injuries not enumerated above	431	113	323	137	95	50	849	300	1149
Total	623	156	425	185	124	65	1172	406	1578

REPORT under the Laws relating to Factories and Workshops, by ROBERT BAKER, ESQ., for the half year ended April 30, 1875.

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Factory Inspectors' Office,
Whitehall, London,
June 19, 1875.

SIR,

IN the last week of December 1874, the abstracts of the Textile Acts of that year were issued to the textile manufacturers in my division. In the envelope which contained them the following circular was also sent:

"Factory Inspector's Office,
"New Home Office Buildings,
"Whitehall, London, S.W.,
December 7th, 1874.

"Gentlemen,

"I HAVE the pleasure to forward to you two copies of the Abstract of the Textile Factory Acts, 1833 to 1856, as amended by the Factory Act, 1874: Please to fix one of these copies on a moveable board, and hang it up at the entrance of the factory, and the other in any room or passage in the interior where it can be seen and read by the workpeople. Will you also be so good as to inform me, at the above address, (postage need not be prepaid), and with as *little delay* as possible, what are the hours

of work and meals you have elected for your works, and whether your half-timers are to work on half days or on alternate days?

"I am,
"Gentlemen,
"Your obedient Servant,
"ROBERT BAKER,
"*H.M. Inspector of Factories*
"*and Workshops.*"

This circular appeared to me to be necessary in order that, in future compliance with section 9 might be easily effected, which says,

"A change in such hours or in the mode of employment of the children shall not be made until after the occupier of the factory has sent written notice of his intention to make such change to the inspector or sub-inspector of the district in which the factory is situate, and shall not be made oftener than once a quarter, unless for special cause allowed in writing by an inspector."

With former abstracts, meal-hour notices were sent out separately, and such changes could then be effected without a renewal of the abstracts themselves. But, under the present system, notice slips have had to be devised to paste over what is called "the Notice" on the abstract, so that any change of hours and meals may be accomplished without the cost to the public of the renewal of the whole.

In the first instance, the occupiers generally did not acquaint themselves with the fact that the hours and modes of employment of all the protected persons, and of children especially, was to be given, as I have just shown, to the inspector, before any change in them could legally take place; nor was any such change to be made oftener than once in every quarter of a year. The consequence was that, there have been found in the mills many cases of incorrect abstracts, the actual hours of work being quite different to those stated thereon. However, up to this time, no prosecutions have been taken for this neglect, though the offenders have not the slightest notion that they have thereby rendered themselves liable to a fine, if not to imprisonment, for a false notice.

The agitation in the factory mind, both among the employers and employed, occasioned by the alteration of the law from working 60 hours a week to 56, appeared to me to be a reasonable excuse for omitting to do more at present than caution the manufacturers against a repetition of this neglect. But, it was absolutely necessary that the officers appointed to carry out the law should very early know, what had been the result of this intended sanitary legislation, and how far it had answered its purpose.

To my inquiry as to the hours of work and meals elected, and the employment of short-time children, I received upwards of 1,400 answers. From the districts of Manchester proper, from Bolton, Blackburn, Preston, Wigan, Clitheroe, Accrington, Stockport, Hyde, and Chorley 1,076; and of these, 631 declared their election to work to be between 6 a.m. and 5.30 p.m.; 375 between 6.30 a.m. and 6.0 p.m.; 27 between 6 and 6; and 11 between 6.30 and 5.30.

It was evidently at first the desire of the employers to give the women and children the benefit of the shorter hours earlier in the morning, in conformity with the intention of the framers of the Act. But it was soon more strongly manifested among the workers themselves that, the relaxation should be taken in the evening, and that almost all counsel to commence later in the morning would be of no avail. For though the majority was at first in favour of it, before the summary of the elections could be prepared it was clear that to work between 6 a.m. and 5.30 p.m. would predominate.

The variety of elections, not only for the daily hours of work, but for breakfast and dinner times, was remarkable.

In Manchester proper, the greatest variety of elected hours prevailed, as might have been expected. Those were as follows:—6 to 5.30, 6.30 to 6, 6.30 to 5.30, 6.15 to 5.45, 6 to 5.40, 6.20 to 5.35, 6.15 to 6, 7 to 6, 7 to 7, 7 to 6.30, 8 to 5, 8 to 6, 8.30 to 6.30, etc., etc.

Over the whole districts herein-before given, the elections for the breakfast half-hour were, between 8 and 8.30 a.m., 540; 8.30 and 9, 391. Then the following, before coming to work—755; 8 to 8.30, 8 to 8.35, 8 to 9, 8.30 to 9.10. And for dinner time, for the hour between 1 and 2, 348; between 12.30 and 1.30, 611; and some between 12 and 1, 12.15 and 1.15, 1 and 1.45, and 12 and 2.

In Ireland these elections were still more various. The commencing hours of work were of 12 kinds, the breakfast half-hour of 15 kinds, and the dinner hour of 12 kinds.

The observations made by several of my correspondents on "the want of wisdom exhibited in the passing of a "Permissive Act to regulate the hours of work between "occupiers and workers," and upon "the determined spirit of many of the latter to have their own way," both in hours of work and meal times, afford a singular view of the social and commercial relations which exist both over and under the surface in these stupendous industries.

On this it is not my province to, and therefore I shall not further enlarge upon it than to say that, every day's experience convinces me that, though there is, undoubtedly, a vast

amount of self interest shown by both sides in these relations, and now and then of a disturbance in them amounting to positive disgust at some harassing disappointment, there is a spirit of true humanity and of kindly feeling and philanthropy covering the whole, which is of the utmost value to us, as a manufacturing nation; and, therefore, where a mutual feeling of interdependence upon one another is necessarily the preliminary of all their trade successes.

On the one hand it may be true, as a writer in the "Manchester Guardian" asserts, that—

"The masters profits have been diminished by this new Act 5 per cent., equal to an income tax of 1*s.* in the pound: that the cost of mill articles, such as oil, binding, skips, and coal remains the same, namely, at 8*d.* in the pound on his profits: that the wages of the workpeople are either reduced 5 per cent., and thereby taxed 1*s.* in the pound, or, if paid by the masters, will be another deduction of 19*d.* in the pound on the average profits, so that the total effect is, as if the Legislature had put a tax on manufacturer's profits of 3*s.* 3*d.* in the pound."

But, on the other hand, it cannot be denied that, many of our textile factories have been passing from an absolute to a limited liability existence. Many masters, who have hitherto worked their factories single handed, content with what they have acquired and can further realize, are giving up part of their profits, and transferring them and their losses to a wider distribution; and many of those that are coming in are, albeit not used to the large gatherings of days said to be now gone by, yet willing to throw in a fair amount of capital to promote undertakings which promise a reasonable success. I believe it will be found that up to the present time not fewer than 150 manufacturing concerns in the United Kingdom have chrysalized their condition, so to speak, and are waiting for the change which will give them wings for a higher flight than their private business pursuits possibly could do.

It may be the out-look arising from this alteration of probabilities which has suggested the following future of the cotton trade, for example:

"*Prospects of the Cotton Trade. June* 1875.

"The past month has been a very disappointing period to holders, and at the moment the out-look is not very encouraging for either Liverpool or Manchester. Spinners still hold a surplus stock, and in the absence of any improvement in trade in Manchester there is nothing to induce them to increase their late scale of operations in the raw material; meanwhile, the market is further adversely influenced by the pressure to sell cotton

declared against June deliveries or arrived against shipments, and bought some time back on the supposition that an advance in prices would be witnessed this month, if not earlier. In short, the market is suffering from the absence of consumers, who long ago bought in anticipation of their wants on the supposition that prices were going to rise, and from the presence of sellers who bought in expectation of an advance which has not taken place. Spinners having covered their orders do not want to buy now, and speculators being either unable or unwilling to hold their purchases find themselves compelled to sell in a market only partially attended by consumers.

"Sooner or later some improvement will take place, but it is very clear that the prospects are not so promising as they were a short time back, and at present it does not look as if we were going to witness even the more moderate advance in prices looked upon as highly probable a month or so ago. The supply of cotton visible and invisible is only about 100,000 bales less than it was 12 months since. The American crop accounts are very favourable, sufficiently so to neutralize the influence of the slight deficiency in stocks. Trade in Manchester and at the leading foreign markets is quiet, and speculation everywhere is quite dormant. On the other hand, prices are now very low, and when the present pressure to sell cotton declared against forward contracts is over, we may look for more steadiness; but, as we have stated in previous reports, it will require very unfavourable crop accounts to produce a material advance."

On the operation of the 1874 Act at Manchester, Mr. Sub-Inspector Meade-King writes as follows:—

"I feel some diffidence in expressing an opinion on the effect or working of an Act of Parliament which has been in operation so short a time as six months.

"That the provisions of the Act as therein set forth have generally been met by the most loyal submission within my sub-division is, I think, a fact beyond doubt, notwithstanding a strong sense of injury which has been, and still is, entertained by a majority of the manufacturers affected. But it does not so clearly appear to me that, the first object aimed at, viz., the improvement of the health of women and young persons and children, will follow as a matter of course.

"At the commencement of the year, many manufacturers, on consideration of the health of women, were determined to begin work half an hour later in the morning than they had previously been accustomed to; and this I cannot help thinking would have proved a considerable boon to mothers of families and their children, especially in the winter months. But it soon became apparent that the employed, as a rule, were opposed to the alteration and dissatisfied; and preferred the additional half-hours relaxation in the evening.

"Employers yielded to their wishes; and now, there are not in my sub-division half a dozen textile factories in which work does not commence at six in the morning.

"Relying on my own experience only, I fail to see any necessity for that elasticity in the hours of labour, of employment, and refreshment which has already, in too many instances, disturbed the harmony which should exist between employer and employed; and which will possibly cause some difficulty in the due administration of the Act.

"I know no textile factory in which the hours of work are between 7 and 7. With regard to the employment of adult women, it seems questionable whether the loss to the manufacturers caused by the daily loss of half an hour's labour, and estimated at from 5 to 7 per cent., is sufficiently compensated by any benefit which the women are likely to derive from the additional half-hour's rest in the evening.

"Those provisions of the Act which regulate the employment and education of children seem deservedly to meet with general approbation. Education will undoubtedly be greatly promoted by the extension of the minimum age at which children can be employed 'full time,' from 13 to 14, unless certificates of proficiency be obtained. Hitherto I have observed that, as a rule, children employed in factories are never sent to school until they begin to work as 'half-timers.' Henceforth parents will see the necessity of educating them earlier, that they may obtain the full-time wages for their children's labour at as early an age as possible.

"The employment of children in morning and afternoon sets is generally considered preferable to the alternate day system; and I have been pleased to find that, in the whole of my district there are not more than three or four factories in which the latter system has been adopted.

"It is to be hoped that the prohibition of the employment of children under 10 years of age, in conjunction with the educational test required for full-time employment at 13, and further aided by the action of school boards in localities where they exist, will ensure the earlier education of children, to the neglect of which I have alluded to above.

"Some difficulty was experienced at the commencement of the year in the comprehension of the enactments, which regulate the employment of women, young persons, and children on Saturdays.

"Many different interpretations were adopted, and not a few manufacturers took advantage of the doubt and continued to work on that day as they had previously worked.

"So far as I know, however, they are all now in strict conformity with the Act, save as regards the half-hour for cleaning machinery.

"I have heard many complaints that what is now termed the cleaning half-hour on Saturdays is occupied by employment in manufacturing processes, and I think it quite possible that such

complaints are well founded, though as yet I have not been able to detect a case.

"It would be more satisfactory if a definite hour were fixed for the total cessation of employment of whatever kind on Saturdays."

Mr. Sub-Inspector Cramp writes of Bolton, Blackburn, Accrington, Darwen, Clitheroe, and their neighbourhoods, and which may be taken as describing the rest of Lancashire :—

"The reduction of hours of labour in textile works has been effected in my sub-division without any serious difficulty. The elasticity of the hours, by which I mean the permission to work between 6 and 6 or between 7 and 7, and the varied arrangements for allotting the two hours for meals during the day, has worked much better than I had anticipated. During the winter months there was some diversity of hours of labour in Darwen, Haslingden, and other country districts, rendering it somewhat difficult to detect overtime. But in Bolton the hours have been from 6 a.m. to 5.30 p.m. since the commencement of the year; and in Blackburn 6.30 to 6 during the winter, and 6 to 5.30 since April 1st.

"With very few exceptions, all the factories in my district are now working from 6 to 5.30, deducting 8 to 8.30 for breakfast, and 12.30 to 1.30 for dinner. I think this arrangement will be permanent, as it seems to suit the operatives better than any other.

"To anyone accustomed to commencing work at 6 a.m. all his lifetime, it is easier to rise at half-past five than six; and the half-hour in the morning cannot very well be spent in a profitable manner. Whereas the half-hour at night increases the opportunities for recreation, improvement, and social or domestic duties.

"It is doubtless a hardship for women, girls, and children to turn out so early on winter mornings: but it is just as dark, wet, and cold at half-past six as at six; and until some arrangement can be made by which work need not commence until the workers have had breakfast, say from 8 a.m. to 6 p.m., less an hour for dinner, I am of opinion that the earlier hour is in every way preferable.

"Immediately after the Act came into operation many complaints were made of the loss on production. It was said that, whilst the hours of labour were reduced only 5 per cent., the production was lessened 6 per cent. This, however, was during an unsettled time, when there were disputes between masters and operatives as to commencing and leaving off work, the reduction of wages for day hands, and as to which of them should bear the loss on earnings of piece-workers.

"These disputes are now happily things of the past, and the reduction of hours is in some respects compensated for by

increased energy on the part of the workers, improved and increased machinery, and the erection of new mills.

"The half-hour allowed for cleaning purposes on Saturday has, so far as I am aware, been properly used in my sub-division. Indeed, in most factories the engine is stopped earlier than is required by the Act, as half an hour is not sufficient for the weekly cleaning.

"The raising of the age of half-timers from 8 to 9, and next year to 10, is generally approved. But the operation of this enactment was to some extent frustrated by employers and parents obtaining surgical certificates in December 1874 for all children of the neighbourhood who were then 8 years of age. By this means they are allowed to work this year although under 9.

"The enactment section 6, sub-section 1, p. 6, stating 'children 'employed in morning and afternoon sets not to be employed on 'Saturday in two successive weeks, nor on Saturday in any week 'if they have worked more than five hours on any other day 'of the week,' works very well where there are two half-timers assisting a spinner or weaver, as in that case they have always one present. But in cases (very general in weaving factories) where a woman has only one half-timer to assist, she has to do without any help every other Saturday. This being cleaning day, the children are of more use to her than on any other day, as in case of the weaver being without the child, she has to stop all four looms for an hour or two, and do the cleaning herself.

"So great a disadvantage is this felt to be that, in Darwen the manufacturers generally have adopted the alternate day system, and employ the children on Tuesday, Thursday, and Saturday only, all in one set, never changing. This is lawful, because when children are employed on alternate days the Act does not say that they shall not be employed on Saturday on two successive weeks.

"I am of opinion that the alternate day system is altogether a mistake. Ten hours a day is too long for a child to work, and the following day's rest does not compensate for the extra strain. When employed in morning and afternoon sets, the half day's work does not injure the child. The three hours at school is a complete rest, and this leaves two or three hours a day for recreation.

"In the education of children arising out of the mode of employment of them at Darwen, children always employed on Tuesday, Thursday, and Saturday should of course attend school for five hours daily on Monday, Wednesday, and Friday. The consequence is that the schools are overcrowded, and there is a lack of teaching power on those days. Whereas on Tuesday and Thursday the schools are comparatively empty. Under such circumstances it seems impossible that the children should receive a proper education. When two sets of children are employed alternate days, changing weekly, one of these spends 15 hours a week at school, and the other only 10 hours. The alternate day system, however carried out, is, more-

over, a serious impediment in the school arrangements and discipline. The teacher has already two sorts of scholars, day and half-timers, and when a third is introduced on alternate days it is difficult to arrange the time-table to suit all.

"The raising of the age of half-timers from 8 to 10 will, I fear, retard education in manufacturing districts in which there is a school board. Parents will not send their children to school unless compelled: and if schoolmasters do not receive their pupils until they are 10 years of age, they will only have three years half-time attendance in which to fit them for passing the required standard for full time.

"The standard of proficiency in reading, writing, and arithmetic to be required next year of children between 13 and 14 as a qualification for full time should now be fixed, in order that the requisite six months notice may be given in the Gazette."

Of the operation of the Factory Act, 1874, in and around Stockport Mr. Sub-Inspector Bignold writes:

"There are about 100 mills in the Stockport district for spinning and doubling cotton yarns, and 10 weaving factories. These, with a large jute factory, are the works to which the Act applies.

"*Hours of Work.*

"The hours of work adopted in all but four mills are from 6 a.m. to 5.30 p.m., less 30 minutes for breakfast and one hour for dinner, and these hours have been maintained without alteration since January 1st.

"They were suggested by the hands, the wish of the masters being to begin at 6.30 a.m. during the winter months, and cease at 6 p.m. These latter hours of work were adopted on January 1st and continued up to March 31st in four mills, all but one being in outlying districts. They are now working from 6 a.m. to 5.30 p.m., but will revert to their winter arrangement on October 1st.

"*Wages.*

"The reduction of wages paid to the day wage hands in proportion to the reduced length of the working day has been very general, and has been effected without any more serious result than grumbling. When times are again good and labour scarce they will go for, and probably get, the old 59 hours wage for the 56 hours work. The piece-hands are also generally making less earnings under the new Act.

"*Short-timers.*

"There are not less than 3,000 short-timers in the Stockport mills, four fifths of whom work in morning and afternoon sets. The sets are changed every Saturday morning in order to comply

with the Saturday regulations for children's work introduced by the '74 Act. The whole holiday every alternate Saturday is very highly prized, and the change from morning to afternoon at school every week, instead of as before every month, is very much approved by the school teachers.

"The remaining 20 per cent. of the short-timers work on the alternate day system, which is found to answer by those masters who have tried it; absences from work being less frequent.

"In ordinary schools the alternate day attendance also works well, but there is in Stockport a school with 300 pupils that are all half-timers, and where the course of instruction is arranged for morning and afternoon sets, the morning lessons being repeated in the afternoon, and in this school the presence of the alternate day children has caused a difficulty.

"*Age of Short-timers.*

"The introduction of 9 as the minimum age at which a child shall work has caused no inconvenience, but its full effect has not yet been felt, for a great number of children between 8 and 9 years of age were certified in December last, and are still working (though less than 9) under the temporary modification.

"*Competition with other less restricted Trades.*

"Next year, and still more in 1877, when the minimum age will be 10 absolutely, a great scarcity of short-timers will arise, and press most hardly on the cotton manufactures of Stockport. The felt hat trade, which is very extensive here, employs a large number of children, chiefly girls, in lashing, an easy kind of needle-work, and in these works, 8 being the legal age to begin work, all parents wishing to send their children to earn wages under 10 years will send them either to the felt-hat works or the tobacco factories (one of which has now 50 half-timers), or in the summer to brickfields, and thus the supply of 10 year old children who are not disqualified for cotton mills by having learnt another trade, will be much curtailed.

"*Age of Young Persons.*

"The introduction of the educational test for full-time labour at 13 in textiles, which takes effect next January, is a still more serious matter for employers under the '74 Act. Children of 13 who cannot pass the required standard will either leave the cotton mills, or abstain from seeking employment there, allured by the temptation of full-time wages at the industries I have mentioned, and at calico printing and bleaching works, which are extensive in the district.

"*Educational Test for Young Persons.*

"Standard Three is recommended by the Stockport School Board, who have very carefully analyzed the educational results

obtained under the short-time system in Stockport, and experience must be had, how Standard Three works, before any advance can be recommended.

"*Cleaning at Meal Times.*

"The system of cleaning during meal hours, and at the end of the day after the engine stops still continues, but is much diminished by several convictions which I have obtained, and by the half-hour set apart for that purpose on Saturday.

"*The 4½-Hours Limit.*

"The effect of this has been to make the 7 to 7 option, a dead letter. If the working day has to be divided into three parts (as is unavoidable under the 4½-hours limit), work will always begin at 6 or 6.30 a.m. and close at 5.30 or 6 p.m.

"The tendency of the cotton operatives in Lancashire and Cheshire is very strongly to early work, and evenings for recreation. But I have no doubt if five hours work without a break were still legal that,* by arrangement between employers and hands, at any rate during the winter months, the 7 to 7 option would have been widely had recourse to, and the time bill would have been 8 a.m. to 1 work, dinner 1 p.m. to 2, and 2 p.m. to 7, work. The gain to the masters by saving of light and of loss from stopping and starting the engines, as well as from want of punctuality of the hands, would have enabled them to come to an agreement without a reduction of wages. The elasticity of the Act is in fact destroyed by the 4½-hours limit, and I question if the gain to the operatives is at all commensurate.

"*The whole Holiday every Saturday.*

"The whole holiday every alternate Saturday has caused some trouble in the large mills, where the short-timers are very numerous (in one mill nearly 300). Saturday is the pay day, and though only one set of children is required for the work of the factory on Saturday mornir. ; yet there is a great difficulty in keeping the others out of the rooms where some of the processes are carried on whilst they are waiting to be paid. And as the parents are generally at work, it is doubtful if it would benefit the children, or be for the public advantage, if those children were turned into the streets. It would be most desirable in short-time towns like Blackburn, Bolton, Stockport, and others, that the schools should be open, on Saturday mornings, for half-timers only."

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* *See* my Report for April 1873, p. 136.

Of the operation of the Factory Act of 1874 in Belfast and the north of Ireland Mr. Sub-Inspector Cameron writes on June 11th,—

"With very few exceptions the mills and weaving factories in this town give the additional half-hour directed by the Act for rest and refreshment; in the morning, work commences at 6.30, and three quarters of an hour are given respectively for breakfast and dinner, making up the required two hours.

"Some complaints have been made regarding the half-hour on Saturday from 1 or to 1½ p.m., firms alleging that for any purpose of work it is useless, as the hands will do but little after one. It has, however, become a habit with several establishments to pay their hands during this half-hour, and satisfaction has been expressed with this arrangement, though the majority have, I understand, a great desire to possess unrestricted the privilege of continuing work until 1½ o'clock.

"A very important change has been brought about in most of the mills where half-timers are employed as regards their school attendance. The greater number of establishments have selected the alternate day system in preference to the former division of children into morning or afternoon sets. I am aware that in the north of England dissatisfaction has been expressed by schoolmasters, &c. with such change, and that it is alleged the attendance of a child at school for a longer period than three hours during one day is useless, so far as regards the acquirement of education. But the school hours generally obtaining in Lancashire are from 9 a.m. to 4 p.m., and sometimes 5: whereas in the National Board schools of Ireland, the hours are from 10 a.m. to 3 p.m.; and it s quite the exception when, any positive instruction commenceis before 10 a.m., (though an entry may be made in the school book 9½.) Thus, there was always a difficulty in securing a sufficient amount of daily tuition for half-timers under the old system, unless where mills had private schools attached to them. There was, in addition, much confusion always attendant on the changing of the sets during the middle of the day, and children went from the mill to the school, with no meal hour from 9 a.m. to 3 p.m., except "the piece" they took with them to be consumed on the way between the mill and the schoolhouse.

"I have found the alternate day system to be decidedly beneficial. The arrangements in the mills are thereby considerably simplified, and according to the statements I have received from masters and mistresses the educational improvement has increased.

"Regarding the wholesome restriction on the age of children eligible for half-time employment there cannot be two opinions The only difficulty in connection with its introduction has been a tendency for children above eight years of age but under nine to seek work in premises exempted from the '74 Act. Next year, when similar restrictions will extend to young persons, this difficulty will assume a more serious aspect.

"I have only further to observe that, the new system being now thoroughly introduced and understood, is working satisfactorily."

Speaking of the Bristol district, there are only five factories affected by the Act of 1874, although the total number of works, great and small, under restrictive legislation amounts to 207.

Two, the Great Western Cotton Works and Stephens Bros., employ the largest number of hands. The remainder have but few in the textile branches.

When the Act came into operation at the beginning of this year, dissatisfaction was expressed particularly by the females anticipating a diminished rate of wages in proportion to diminished hours. In fact, at the Great Western Works, many of the weavers went out on strike. But after two weeks the directors of the works came to the resolution to pay the same amount of wages as they had done previously, so all the hands returned to their work, apparently well contented with the reduced hours. The Messrs. Stephens and the other firms at once agreed to make no reduction in the wages.

Very few half-timers are employed in Bristol. It is, however, anticipated that as regards "full-timers," on and after the 1st of January 1876 there will be a considerable difficulty in obtaining, in any works in which there is textile labour, a sufficient supply of hands of 14 years of age; but, of course, this only refers to those who may fail in producing the requisite educational certificate, as from the great variety of employments open to the working classes in Bristol, most workers when 14 years of age will prefer other trades than textile.

An opinion prevails, undoubtedly, that any further reduction of the hours of work, will simply result in the transfer of all profitable industries to other countries, where such reduced hours are not compulsory: whilst there is no desire on the part of any manufacturer that the 10½ hours should be exceeded.

In the woollen districts of Gloucestershire, in Wales, and partly in the linen districts of Ireland, work between 7 to 7 have been the hours elected. I have, however, been obliged to concede in the former, to the burlers and other women employed by daylight, and mainly on piece-work, the privilege of having their meal times at different times to the other workers, under the provisions of the Act of 1844, section 36.

Kidderminster.

As regards the alteration of the hours of work of children, young persons, and women in the Kidderminster district the Act has worked fairly well. There have been no complaints that I have heard of, either on the part of employers or employed; and as regards the increased age of children, that part of the Act has hitherto been said to work well and satisfactorily. Parents strive, as they generally do, to urge the employment of their children before they are physically fit for any kind of labour; so that, the children in this respect, require every kind of protection against the scheming and want of truth on the part of those who should be their natural protectors.

It seems to be generally conceded on the part of the employers of labour that, the raising of the ages of children to 9 and ultimately to 10 years before they can be employed, is a wise and salutary provision, and no inconvenience that I am aware of, has as yet arisen in consequence. But with regard to the age of young persons being raised to 14, it is doubtful whether this provision will meet with the same favour. There appears to be great difficulty now, when trade is ordinarily good, in finding a sufficient number of hands at 13 years of age; and that difficulty will, for some time at least, be considerably increased after January next. Speaking generally, I think, and the employers think, that the physique of young persons at 13 is ample, as a general rule, for the kind of labour imposed upon them in this district, and there does not seem to be the same necessity for raising the age of young persons as there is that of children.

Accidents.

The total number of accidents reported to me during the half-year has been as follows,

	Males.	Females.	Total.
Adults - -	742	129	871
Young persons -	472	171	643
Children - -	118	45	163
			1,677

Of these 84 were fatal, from the following causes:—

Explosion of a boiler	4
Crushed to death by various instrumentalities	25
Drawn over a fly-wheel in a pit	1
Struck by a flying portion of a cog-wheel	1
Fell under a truck of loaded iron	1
Fell on an iron plate	1
Fell into boiling liquor	1
Killed by machinery	1
Run over on a railway	2
Scalded	4
Burnt by sulphuric acid	1
Entangled in shafting	3
Killed by a hoist ascending or descending	6
Fell from a traversing crane	3
Fell with his head on a bolt	1
Moving a stone when the machinery broke	1
Fell from platforms	4
Fell from a ladder	1
Fell into a graving dock	1
Fell into a ship's hold	1
Drowned in tanks	2
Killed by a blow from a lever	1
Thrown off a railway bogie	1
Fell into fused metal	1
Fell into a vat of oil	1
Killed in a wood yard	2
Killed by a metal casting	1
Burnt by a fuse	1
Fell into boiling paper	1
Killed by the descent of a piston rod	1
Killed by a fall through a trap-door	1
Killed by the descent of a steam hammer	1
Suffocated by gas	1
Fell on a revolving shaft whilst whitewashing works	1
	80
Not recorded	4
	84

Of those that were crushed to death, several were so between the buffers of railway locomotives and waggons, and seem unavoidable, except with more care on the part of the workers, who are often extremely venturesome. Of those entangled in shafting, the cause is still too common,

in all kinds of works where there is shafting moved by power. Those killed by hoists were so by the forgetfulness on the part of the sufferers of the silence with which these hoists work, and by the folly of looking under or over the ascending or descending hoist. Of those that have been drowned in tanks, a few necessary planks would have probably saved them from such a catastrophe. Of the whole number, I believe not exceeding four arose in textile works; the rest were in other branches of industry.

Breach of the Workshops Act among the Milliners.

Mr. Sub-Inspector Taylor writes from Preston as follows:

"As the matter is very pressing, I write to you about a case which will come before you in the ordinary way in my last week's report of duties. During a recent visit to Lancaster complaint was made to me of breaches of the Workshops Act amongst the milliners. In particular, one case was cited where the father of a young woman had brought her down to the chief constable at past ten at night, saying that she had only then left work, was never let out earlier, and who had ultimately withdrawn her from the establishment altogether, in consequence of her failing health. It so happened that Mr. Coles was to meet me in Lancaster that day, and I repeated the story to him. We both visited the girl, and so deplorable was the story she told that, we decided not only to visit the workroom where she had been employed, but several others wherein similar irregularities were reported. We did so, and the result was that, by his directions I laid informations against three firms for working after 9 p.m., the night moreover being Saturday.

"The cases were heard yesterday, and two out of the three were convicted. Extraordinary to say, however, the very case that had set us originally in motion broke down! That young woman in being put in the witness-box swore the very opposite of the story she told us, and two improvers followed suit.

"The magistrates dismissed the case, and asked to see me afterwards. They both in most indignant terms expressed an opinion that perjury had been committed, and begged me not to let the matter rest. I promised them that so far as I was concerned I would not do so, and the following is the course which I have adopted. I visited the workshop again that afternoon. The three girls who had been engaged in the case were not present, but four others were. I found an old permission to substitute Tuesday afternoon for Saturday as half-holiday on the wall, but with all the dates defaced. The four girls present severally declared to me that neither in the week in question nor in any other week had they had a half-holiday, and that they did not even know of the regulations. The proprietor,

now having an inkling of what was going on, appeared and confessed that it was so, and begged for clemency.

"I ask you now to give me permission to proceed against him on all seven cases for working after 4 p.m. on Saturday (they commence at 8 a.m.), and to let me do so at once whilst the memory of the matter is still fresh, that the law may thus be vindicated and promptly. For it to rest as it is would be a great disaster."

There have been several cases of overwork among milliners during the past half-year, and I am afraid many cases of night work which have not been prosecuted because of the unwillingness of the girls to give evidence. After all, this overtime work by milliners' girls, which is so great an evil to the constitution of the workers, and I doubt not so great a cause of immorality amongst them, and the forerunner of so much disease, remains more with the public than the Department. The law is that, these girls shall not be employed for more than 10½ hours a day, though with permission upon special occasions they may work other two hours, with an extra meal. This at least has been made known to the employers, and could be well kept if they had the courage or willingness to estimate the time it would take to complete a wedding or a mourning order, and refuse to run the risk of fines when tempted by an unlawful compliance with the wishes of their customers. Unfortunately, this temptation is often far too great for their moral honesty. They cannot withstand the pressure put upon them, and the health of the girls is thus sacrificed for the pecuniary advantage of the employers.

This, in a few words, is the history of this evil, which, in one form or other, we have been so long attempting to eradicate; an evil which begins by being insanitary, and ends too frequently, by being immoral.

Prosecutions.

There have been in my division this half-year 435 prosecutions, of which 134 were for offences in workshops; and there have been again many withdrawals on payment of costs. I have again and again brought under notice, and especially now that so many parents and other working people are prosecuted for offences against these laws, that cases have so often to be withdrawn on account of the heaviness of the costs, which amount to even more than the penalty, and would be therefore unjust to add to it. There is nothing to be said against costs in ordinary cases: but

if, in the wisdom of Parliament, those against working people were reduced by a special clause, it would save much heart-burning, and add very much to the dignity of the law itself.

The Nail and Chain District, Black Country.

Mr. Sub-Inspector Brewer's Report to me of the nail and chain district of the Black Country is most voluminous, and embraces almost every topic which affects this peculiar branch of labour:

"The nail trade has never been better," he says, "*i.e.*, of course within the past half-year. The workers are divided into three classes, namely, the 'hundreds,' *i.e.*, those making the large class of nails or spikes, the 'thousands,' those who make the smaller class, which two bodies were once united in order to ameliorate their position, but are now separated; and the horse-nail makers, who stand aloof from both, and form a separate branch of the trade. The peculiarity of the horse-nailers is, that they have kept out of their branch all women, with one solitary exception. She had a very near relation who was a 'fogger,' who could thus easily dispose of her nails, and defy the efforts of his workmen to trace them to the market.

"The chain trade up to Christmas continued good, but since then there has been some depression in it from orders not coming in, and there have been some attempts to reduce wages, which have been successfully combatted, which is attributed to the operation of the Workshops Act.

"From both the nail and chain trades there are strong representations made against the labour of women, whether as to the numbers employed or the size of the articles made. The women are said to take the place of fathers as well as of husbands, whilst the men are idle and drunken. So difficult, too, are some of those shops to find that, the same place may be passed many times, and only be discovered at last by the merest accident. My efforts in Rowley," says Mr. Brewer, "are checked, also by another enemy than unwilling justice, viz., the insufficiency of school accommodation. I do not see how I can force into school 20 children out of one street, and leave another 20 out in the same street. This renders the Act unpopular.

"In the whole parish of Rowley I can only find eight schools. Of these there are in Cradley Heath, one, the board school, one, an endowed school, and the third, the new British. Old Hill has two, one under Mr. Daily: efficient, but much under-staffed, and one, under a young girl.

"I subjoin a table showing the approximate number of half-timers in actual attendance, and noticing where school boards are in existence:—

District.	Number of Half-timers in School.	School Boards.	Remarks.
Old Swinford - -	110	School board.	No compulsory clause in force.
Cradley - -	100	None.	——
Halesowen - -	130	„	——
Dudley - -	150	Board.	In full operation, but affects only half-time children little, if at all.
Bromsgrove - -	220	„	Just elected, no compulsory clauses in operation.
Kingswinford -	100	„	Full operation, and the only board which at all assists me.
Rowley Regis - -	120	„	No school as yet.
Cradley Heath -	158	„	Same as Rowley.
Total - -	1,088	—	——

"I think if I made a strong whip I should be able to swell this list to 1,300.

"There are no school boards for the Lye, Halesowen, and Cradley; and no part of my district has greater need of such machinery. There are thousands of children in these places which I am unable to touch, for this reason.

"Since the 31st of April 1874 I have issued 100 summonses. From the 31st of April to the 31st October 1874 I prosecuted for 41 offences. From the 31st October 1874 to 30th April 1875 I prosecuted for 59 offences: and out of all these I have only lost three. I have had two cases of obstruction, in both of which I was successful. I have had one case of a boy making use of forged certificates of age. A parent was also detected using false certificates. In like manner a master of an adventure school, in order to increase his earnings, issued certificates for night attendance. I detected it and prosecuted the parent for conniving at it. Almost daily I detect some child in falsehood as to its real age, tutored thereto by its parents.!!!

"With respect to educational requirements, no doubt the Act has increased education: but there are hundreds of children evading the law; some, by waiting for my coming; others, by false representations as to age and signals, whilst others prefer running the risk of being found out.

"Taking them from first to last, I have 30 schools which I constantly visit, to say nothing of a number of dame schools. I took the hint from you of getting the schoolmasters to send me in weekly reports of all their absentees. Of these 30 schoolmasters and mistresses, about 18 render me their reports regularly others at intervals, and some only now and then.

"In addition to the masters, I have to thank some of the working classes themselves: for it is only the ill-conditioned and drunkards who refuse to send their children to school.

"Quarry Bank has three schools, the board school, church school, and an adventure school.

"On the 5th of April 1875 the board school had 50 half-timers on the register, the average age being 11 years: and average weekly hours of attendance being 11 hours.

"The half-timers are said to keep the school in a backward state.

"Of the church school, I can only say it is utterly neglected. The rector has relinquished all control over it, and the management is now vested in a committee. The girls' school has a mistress uncertified and unqualified. Thus, I am given to understand that, what with the strictness of the educational code, and the deplorable ignorance of the children, it is next to impossible for the masters to obtain a grant.

"There are, however, some half dozen who have passed the highest standard; and one or two of these are now pupil teachers, and I hope yet to see my way to get them to college.

"The following is a specimen of a school certificate given last year:—

"1874. This is to certifie that William Hodley atends
"school 512 days a week. M. Bradley.

"August 14 Present 5½ days M.P.
21 Present 5½ days M.P.
28 Present 5½ days M.P.

"This schoolmistress candidly confessed 'she did not think she was a very proficient scholar.'

"In the Worcestershire part of my district Mr. Dodd, the master at Bromsgrove, reports—

"On books—1873—4.
" 1874—71.
February—1875—81.

"Attendance well sustained. General willingness to conform to regulations. The majority of the boys show deplorable ignorance, for 8 cases out of 10 are unable to do anything but read, and this very elementary. A steady attendance for 12 months might, with very hard work, bring 25 per cent. up to the second standard. In summer, in this district, harvest time and fruit gathering most materially affect the school attendances.

"Mr. Abel, the excellent master of Catshill School, in September 1874 reported as follows:—

"The number of workshop children in attendance is 53. Since your appointment the same number in addition have passed through the schools. Trade being good, many children are taken away from nursing and put to the nail block. By far the greater part of these have never attended a day school, and no doubt never would have done so but for the operation of the Act.

"Of the 68 half-timers in attendance now, 28 are in the lowest standard. In fact, every half-timer has to be sent into the lowest division of the last class, literally being only fit for a low class in the infant room.

"It takes a long time to get these latter to observe habits of cleanliness. Many of them would never wash the neck till Sunday comes round were I not to send them to the washing bowls to do so.

"I am more surprised at Halesowen than I can express, and the number of half-timers attending school, and the regularity of the attendance. The people are deemed terribly rough, vicious, and dissipated, and yet I reckon 130 children in school as half-timers.

"One thing notable is that I have even got children attending half-time, out of Islington; a street with a sad name, and in which all the nail shops have to be entered through the houses. For years, this has been looked upon as a den of iniquity and drunkenness. It is also most inaccessible, and I have only been in it twice, as I looked upon it as a loss of time, my appearance being the signal for a general stampede. I shall, however, have to go again, as it has been whispered to me that I was afraid to go.

"Dudley Wood is a great seat of chain making, and for a small hamlet there is a wonderful amount of shops and workers. In May 1874, 78 children were on half-time attendance, which has risen to 120. The schoolmaster's report for March 1875 is valuable. 'As a rule' says he, (Mr. Hutchison), 'I find the children 'attending under this Act very much below the average in pro-'ficiency, dull in intellect, and slow in comprehension. This I 'attribute to the ignorance, carelessness, and neglect of parents, 'who have placed every obstacle in the way to the working out of 'the Act; evading by every possible means the energy displayed 'by those more particularly concerned in the carrying it out: as 'well as to the lack of good schools. It has been a very common 'occurrence with me to admit children varying in age from 10 to '13, who were altogether ignorant of the simplest branches of an 'elementary education. This being the case, I find it extremely 'difficult, indeed impossible, to work up such children to the 'requirements of the code. This difficulty, I think, would be met 'to a certain extent, if, instead of children attending the year 'round in the afternoon, the system under the Factory Act could 'be introduced. At present they come to school after a morning 'of hard work with all energy departed, and too tired to exert 'themselves at their lessons. I attribute the success of this school '(so far as numbers are concerned) to the energetic manner in 'which this Act has been brought to bear upon the neighbourhood, 'and to the promptness of action with which every known breach 'has been met. For although we have school board officers, 'their services are never required in connection with these 'children. Great progress has been made during the past 12 'months; and now, very few, if any children, attend less than the 'required 10 hours; but by far the larger portion, attend from '12 to 15 hours a week.'

"The remark of Mr. Hutchinson as to the children being too tired for lessons, is only too true. Most employers and parents send their children to school in the afternoon. They work them all the morning, some from 6 a.m., others from 7, till dinner time. That meal over, then follows school from 2 till 4.30, and then the poor little wretches are set to work again till 8 p.m. Single handed as I am, it is impossible for me to prevent this. The neighbours cannot inform, as they are not certain of the fact, and are also too much engaged in their own work to do so. And if they could, the putting them forward as witnesses would be injudicious with reference to the public peace.

"Five half-day attendances, and these morning or afternoon, would procure all needful regularity. Complaints are constant that the half-timers are neglected, put into cold rooms, and not looked after properly. I should not be particular for a mile for a school, as to distance; but where the school was really too far off, I should allow attendance at the nearest Government school: for I believe it is in very few cases that the outcry of distance is made on account of the child who has to walk it. It is raised either by the parents or employer, who have to sustain the loss of the extra hour of labour they would otherwise be able to screw out of the child.

"*Women's Work in these Districts.*

"'I thought this was a free country,' was a remark which greeted me as I entered a nail shop in the outskirts of a large manufacturing town. I inquired, what was the matter now? And was answered, 'Do you call this a free country where women are employed in such trades as these are here?' I replied, I had again and again discussed this question with working men around me, and I am now continually asked whether I cannot do something to stop women's labour, especially in and around Halesowen, where 'hundreds' work is the order of the day, and is far fitter for men's work than women's!

"The root of all the evil in the Black Country appears to be drunkenness, no matter whether the drinker be puddler, collier, chain or mail maker. The outcry against the colliers and puddlers' wives working is very great; not perhaps so much from their influx into the trade, but from the fact that, they work night and day, and toil and slave: and for what? Not for the price that straightforward masters would give, but for any price any crafty knave of a master chooses to offer. These people work and do not stand out for 'tommy' or 'beer' so long as they can get something to satisfy their half-starving families. Whilst the ought-to-be bread winner is luxuriating in some public-house at his ease in 'training his whiffet' for some future running, on beef steaks and the best of good fare.

"Day by day I am more and more convinced that this woman's labour is the bane of this place. Nor do I confine this remark to the nail and chain trade alone. It was only the other day that a young woman addressing me said, 'I say, master, I wish you 'would make my man do a little more work and me less! I

'married a swell, I did.' On my inquiring what she meant by a swell, she replied, 'Why, when I married him in the 'morning he had a smart gold watch and chain, and a smart dickey. 'But when we came to go to bed at night, I'm blessed if he had 'ere a shirt on; and ever since I've had to keep him by working 'in the brick yard, and not only keep him, but find him money 'to drink.'

"Nor is this state of things confined to the Black Country. I went one day over to Bromsgrove, and in conversation with a nailer, to whom I preached my usual sermon on women's labour, and the growing custom of idle, lazy young lads looking out for skilled industrious wives in order to obtain 'an easy life,' he said, 'That is true! There is my wife's brother who got a 'decent girl into trouble and then would'nt marry her, though 'we all did what we could to pursuade him; for he said, he 'weren't agoing to marry a lass as could'nt work; and he 'should look out for a nailer, and has found one.' The evil of this is that, in marrying a girl that can work, they both marry young, but neither have anything put by; and they must needs run into debt for the little furniture and tools they require. Things go on smoothly for a short time perhaps, and the skilful wife keeps not only the house going, and her lord and master in drink: but, in addition, pays off the debt. But the day of reckoning comes in the shape of one baby and then another: then sickness, and other troubles, and the once skilful wife is now a haggard untidy woman, no longer able to earn much. Starvation is in the house, and where then is the legitimate bread winner? If he has ever attempted to work, his career of idleness has caused his hand to lose its craft, or a course of drunkenness has so debilitated him that, he can no longer stand the fatigue and heat. Nor is this the whole of the mischief. Whilst the mother toils and slaves, the children are left uncared for to wander shoeless and in rags, till they are old enough to blow the bellows for their father at a miserable pittance per week—to be kicked and cuffed, hear filthy, indecent, and blasphemous language, and are then sent into the shop amidst men degraded by drink and gambling, in time to follow the same course.

"Take, again, the instance of a collier's wife in this Black Country who works at chain making about 10 hours a day, for which she is paid 8*s*., though if she had taken her work to an honest master she might have had 12*s*. Out of this, before she can take any for herself she has probably to pay 1*s*. 6*d*. for a child put out to nurse her baby, whilst she works: 2*s*. a week for her breezes, (*i.e*., firing for her nail making,) and 1*s*. for the hire of her stall, leaving her half a crown for her subsistence. It is true this may not be the same in every case, but in far too many, it is.

"My experience is that, the chief encouragers of such labour as this, are the 'middlemen,' the 'foggers,' and the 'drunkards.' The following is the answer I received, to a question addressed to some well-meaning and intelligent chain makers.

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"One of the evils arising from female labour is the number of hours they are allowed to work, being so many in excess of a great deal of male labour. We would suggest that all females commence work not earlier than 8 a.m. and not work later than 7 p.m.

"We would suggest that every occupier or owner of a chain shop should be served with a copy of the rules, *i.e.*, the rules of the trade, which it should be compulsory by law to have hung up in the shop. That the Factory Act holidays be applied to chain shops."

"These 'middlemen' are a great curse to the trade, for to such the poor drunkard flies who cannot carry on from week's end to week's end, to receive the wages of a few hours labour, and of course, at reduced prices. The woman with a drunken husband is much in the same plight. Lots of these middlemen keep public-houses and 'tommy' shops, and carry on a system of 'truck.' Thus if a workman would decline to spend his money at his employer's house, he gets no more work and cannot therefore refuse; drink they must have, and drink they will have, whether they starve their families or not. It is rare to find many men at work on the first two days of the week.

"The sanitary condition of the shops is often bad. Women certainly work often in an advanced state of pregnancy, but then in the chain shops most of it is hand work and no oliver. Not many days since a tale was related to me by an ironmaster of what happened in a brick yard near Bilston a short time back. The manager noted a girl carrying clay looking exceedingly ill, thinking she had been drinking over night he exclaimed, 'Why, Clara, you don't look up to much, this morning'? 'No more would you, was the retort,' 'if you had had a child during the night.'

"On another occasion I called in at Mrs. Coolis' school, close to which was a chain shop. After the visit to the school I called in at this chain shop, and found a tall lanky boy 'blowing.' I said, 'I supposed he was 13?' This he indignantly denied. To my question if he went to school I got the reply that 'His mother said he was not to go.' Where is your father? In gaol. What for? For deserting mother and us.' The following is the truth of the story. Her husband, an anchor smith, could earn 3*l.* a week. For eight months he had not given her a penny, she had a large family which she supported as best she could. The poor woman, at last getting wearied out, threw herself on the parish, who prosecuted her husband, and the justices sent the man to gaol, though he offered to pay all expenses."

Let the world listen to the following description of this Black Country lately published in a local newspaper.

"'I was a stranger' said I, 'who had come out of curiosity to see the chain making country.'

"'And a bad place you've come to,' said an old woman. 'Its the worst country God ever made. The women do all the work and the men do nothing.'

"'But they work sometimes,' I ventured to remark? 'Yes they do, was the reply, but they always spend all they earn, and more too.'

"In a vacant space at the back of some houses in this village, in close proximity to some most offensive cesspools, was a row of some five or six chainmakers shops. The fires were all going, and none but women were at work. There were six of them in one of these places; girls of from 15 to 20. It must not be supposed that the male sex were absent. Not a bit of it. The lords of creation were there in full force, but they were not working. It was 'Saint Sunday' with them, and they were amusing themselves with skylarking and courting the girls, who were hammering away at their chains. One of these youths became too marked in his attentions to a certain girl, and the result was, he was set upon by the lot and stripped in the yard, the clothes being literally torn off him, while the girls from the other shops came out and joined in the fun.

"At the bottom of Cradley is a pool close to the high road. I have seen men bathing and running about naked. Chain shops close at hand, and a small brickyard with young girls at work there."

This report of Mr. Brewer's is undoubtedly "sensational." But I have not introduced a tithe of what both he and other writers have said of this Black Country. In a report of this kind, or of any kind, it is indescribable, and must necessarily be omitted. But I believe from what I have myself seen, all that I have written is true; and I am afraid that all I should have written, is true also. And the remedy? That I respectfully leave to the Royal Commissioners before whom I have laid Mr. Brewer's report.

In explanation of some of the terms used in these extracts—

An "oliver" is an instrument for welding the links of chains together, and its weight is in proportion to the size of the links. Some are very much heavier than others, and more laborious to work. "Foggers," "middlemen," and "factors" are synonymous terms for a class of men who get a living by buying nails at a somewhat cheaper rate from the working nailer, and selling them at an advance to the large masters. To these "foggers" the improvident hasten, who live from hand to mouth. He, the fogger, in his turn gets the advantage of all little odd quantities, as for instance, a nailer who takes in 18 ozs. of iron would only get paid for the pound, whilst he gets the difference. Foggers are supposed to be greatly mixed up with truck.

"Tommy" is what is given in lieu of wages, such as bacon, cheese, tea, and any other articles of necessity.

Hence a shop kept by a master nailer, or any relative of his, is generally termed a tommy shop. Though the wages are paid down in cash, the workman is expected to spend some portion in the shop, either adjoining the warehouse or across the road, or he gets no more orders for chains or nails.

There is one point more to which I respectfully ask your attention, and it is that, as women are often obliged to use these olivers to weld their chain-links, &c., WEAKLY WORK OR OCCASIONALLY BAD IRON MAY BE INTRODUCED INTO THE FABRICATION OF CABLE CHAINS, ON THE SAFE HOLDING OF WHICH MANY LIVES MAY DEPEND IN ROUGH WEATHER AT SEA; at all events there is so much suspicion about them that, it would be better for the strength of all cable chains to be tested by some Government official, and stamped, before they are trusted for such purposes.

In the summing up of this report (and it must be remembered that surgical certificates for workshop workers are not required by law), we can imagine the physical effect on the workers where they are in competition with steam power which requires from them the greatest physical as well as mental efforts, if the visits and watchfulness of the certifying surgeons were to be abolished or even diminished. Let me repeat what I mean. Some children excuse their attendance at school by their waiting for the Sub-Inspectors calling at the works; others, by false representations as to age; others, by signals leading to different forms of evasion; and, lastly, others, who prefer to run the risk of being found out. Then there is but a partial effort on the part of the teachers to render Mr. Brewer needful co-operation and assistance, notwithstanding his anxious desire to promote the educational welfare of the people under his charge, and thus to procure for the parents who really desire it, and are not vicious and drunken, and who pay for it, the *quid pro quo* for their money. Fancy that only 18 of his 30 schoolmasters and mistresses rendered him their reports regularly, so that an absenteeism arising from an ill-conditioned state of mind, or from parental drunkenness would pass unheeded, when it might be easily corrected and cured. "Well," as they say, may it be "next to impossible for the masters to obtain a grant" from the Privy Council.

The certificate which I have quoted from the keeper of an adventure school, is similar to those, which, in the early days of factory legislation often came under our notice.

In the Worcester part of the district, the increase in half-timers is due to Mr. Brewer's exertions. We see, however, the deplorable ignorance of the pupils, when it is asserted

that, 8 children out of 10 are not able to read, and this only in the most elementary manner.

"It would take," says the schoolmaster, "a steady attendance for 12 months, and with very hard work, to bring up one fourth of them to the 2nd standard, and this, exclusively of the summer season, seeing that, in the summer, harvest work and fruit gathering most materially affect the school attendances."

We may thus form some idea of what the standard should be for fresh pupils after 1876, taking the average of ignorance in districts in which there are no school boards, nor any local authority having an interest in their populations; and also what will be the loss to the country and difficulty for the manufacturers in the diminished labour and production of the non-proficient workers.

What, may it not be asked, can be expected of the social and moral condition of a district in which the scenes I have described are so common, so often repeated, the language so disgusting, and in which it is rare to find men at work on the first two days of the week?

Well, our hope lies in this, that we are trying to win over the masters, and a good many of the workpeople too, to the principle of general education. But this task is Herculean. It has to be performed too with patience, and we ought to begin at the beginning. Nobody ought to be allowed to keep a school without a certificate as to what he or she can teach, the first item of which should be a known testimony as to character.

For the A B C of learning the adventure schools will have to remain for a while, but only with such a certificate, till the teachers either die out, or give up, on finding their offices superseded.

In districts where many a parent has to depend upon her eldest daughter for the discharge of most of her domestic work, it would be absurd to attempt the forcing of such daughters to school, excepting by the most gradual means, for, says the author of the "Switzers":—

"Who are the people to be considered? Not the manufacturers alone, but also they who delve and drive, who weave and spin, who plough and plant, the porters and shepherds, masons, drovers, boatmen, foresters, and guides. These are the men, for it is only through such men that changes in the world are made."

The Factory Regulations of various Countries.

As the proper restriction of the hours of labour of women and children in associated employments, and especially the

education of the young, has of late years become of so much interest in the social as well as the commercial consideration of so many nations, I proceed to show you the last advances made in this direction. In my report for October 1873, I gave the hours of work in the factories and workshops of our own country: and from the consular reports to Lord Clarendon, those of the United States, France, Russia, and Prussia. I have now to add that of Copenhagen, kindly transmitted to me by my friend Dr. Larson; and also an extract from the "Standard" of July 2nd, 1875, with reference to Russia.

From Copenhagen it is stated that:—

"The hours of work of our Factory Act are, for young persons of from 14 to 18 years of age, twelve hours, between five in the morning and nine in the evening, with two hours for meals. For children of between 10 and 14 years of age, six hours and a half, between six in the morning and eight in the evening, with half an hour for a meal. Females over 18 are not subject to the Act. In Russia the labour commission has reported the hours of labour for children from 12 to 14 years of age are six, and eight for those between 14 and 16 years of age."

But in France a new and most comprehensive Factory and Workshops Act was passed by their Parliament in 1874 (not yet, however, fully come into operation, because the preliminary months have not expired), with which I have been favoured by Mons. Maurice, the inspector for the circonscription of Paris; as well as with his manual for the guidance of the 14 other inspectors, distributed as follows: Paris, Orleans, Dijon, Reims, Caen, Rennes, Limoges, Bordeaux, Toulouse, Nimes, Avignon, and Lyons.

My object in introducing the French Act in its entirety is to show whether it is in advance of us, or otherwise, for the amelioration, physical and educational, of the condition of their factory and workshops workers: and also by a comparison with our Act of last year, if there be any differences between them and us, in this great national work, so that it may be at once comprehended.

It should be stated at the outset that there was no efficient Act for the registration of births in England previous to 1836, and that under the Registration Act of that year the parents of any child born, were to give notice of its birth, and the registrar was to inform himself of the circumstances, and to register them accordingly. These registers were not of use for any purposes under the Factory Acts which were passed previously to 1844, by reason of the time not having expired when they might be made available, viz., for those

children who were eight years old after March 3, 1845, and for those that were 13 years old after March 3, 1850.

The same system of registration of births did not extend to Ireland till after the 31st May 1863; so that for factory children the birth registers, to be of use for future factory purposes, do not take date till the 1st of January 1872, nor for young persons till after the 1st of January 1877; so that in Ireland legal registers of births cannot be obtained for young persons till two years hence.

It will thus be seen that, we were driven in 1833 and 1844 for children, and in 1850 for young persons, to rely upon the best available means of ascertaining the ages of the persons employed, viz., by the opinions of medical men, who certified upon view, and in a legal form, as they best might, the ages of such persons, adding as a medical opinion, the physical fitness for each child to be employed.

In future, so far as the mere register of a birth is concerned, the English law is that,—

"In the case of every child born alive after the commencement of this Act, 1874, it shall be the duty of the father and mother of the child, and in default of the father and mother, of the occupier of the house in which, to his knowledge, the child is born, and of each person present at the birth, and of the person having charge of the child, *to give to the registrar*, within 45 days next after such birth, information of the particulars required to be registered concerning such birth; and in the presence of the registrar to sign such register."

Thus, supposing a child, hereafter to be a factory worker, to be registered now, and the legal future factory working age to remain at 9 or 10, such a register will not be of use for any child for factory purposes till 1883 or 4, and in the case of a young person of 13 till 1887 or 8.

In France by the conscription laws, every child as soon after its birth as possible, is to be taken to the public authorities and registered: so that every birth is, and has been long known, and the date of it guaranteed.

It will be noticed too, no doubt, as the readers of this Report glance over the French "articles" that, excepting very casually, and certainly only compulsory under an authority present at the time, no certificate of physical fitness for factory work is required in France as in England with the child's age. This circumstance rather shows upon the face of it that, no matter what its bringing up, as soon as a child is of age to be employed in a factory, it is deemed to be physically fit to compete with the mechanical power with which it will have to contend for a certain number of hours at all events every working day, and to withstand the impure atmospheres

and the other material causes, which always operate more or less on the vital powers of the children, women, and young persons subjected to them in such works.

Not only so, but the new French law proceeds upon another principle, viz., that of restricting the number of employments in which children shall not be admitted as workers at all, or on which they may only be admitted under special conditions. Thus, in Table A., in not less than 68 kinds of works, children are forbidden to be employed; and in Schedule B., in 38 other kinds of works, they may only be employed conditionally, *i.e.*, on terms, the violation of which it will possibly be very difficult to detect.

The end aimed at by this interdiction is to protect the physically unfit from improper labour; just what our factory laws accomplish by the organization of factory inspectors. But certainly the machinery for accomplishing the end in the French factory system appears to be neither so convenient nor so efficient as that in operation in this country. For supposing with the best registration possible, children were permitted to be employed on birth registers alone, we find by Mr. Brewer's report that, hundreds, and may be thousands of the children of the drunken and the profligate, half-starved and homeless, are forced to work early and late, to eke out the difference in the family's weekly income, owing to the vicious habits of the parents.

The absolute interdiction to so many trades of the employment of juvenile labour, appears too, to be an undesirable interference with the freedom of trade, and to be based on fallacious principles as regards the question of physical ability; for it assumes equality in ability or inability for labour of all those of equal ages, and consequently admits of a double evil, namely, of denying work to some capable of undertaking it, and of permitting it in the case of others on the ground that, having attained a certain age they may labour, though neither by development nor by vigour and sound health, may they be fitted for the labour required of them.

The policy of the French law affords therefore little protection against the employment of such as, whether from constitutional debility, or from disease, are unfit for it; nor is it of any avail in arresting the communication of contagious ailments. Whereas the factory laws of our own land are, by the agency of the medical men engaged in their administration, capable, when properly worked, of compassing all these desirable results.

THE ENGLISH FACTORY ACTS.

The English Factory Acts, 1833 to 1856, and the Lace Factories Act, 1861, as amended by the Factory Act, 1874, and as they will be in force *January* 1, 1876.

Explanation of Words.

Factory means all buildings or premises wherein or within the close or curtilage of which steam, water, or other mechanical power is used to move or work any machinery employed in the preparing, manufacturing, or finishing, or in any process incident to the manufacturing cotton, wool, hair, silk, flax, hemp, jute, or tow, either separately or mixed together, or mixed with any other material; except any factory or part of a factory used solely for the manufacture of hats or paper, or for bleaching, dyeing, printing, or calendering. 7 Vict. c. 15. s. 73.

Child means a child under 14 years of age. 37 & 38 Vict. c. 44. s. 12, and 7 Vict. c. 15. s. 73.

Young person means a person of 14 years of age and under 18. 37 & 38 Vict. c. 44. s. 12.

Woman means a woman of the age of 18 years and upwards. 37 & 38 Vict. c. 44. s. 19.

Parent means parent, guardian, or person having the legal custody of any child or young person. 7 Vict. c. 15. s. 73.

Employment. Any person working, whether for wages or not, or as a learner or otherwise, either in any manufacturing process, or in any labour incident thereto, or in

THE FRENCH FACTORY ACTS.

The French Factory Acts with the decrees concerning them, respecting the employment of children and women.

November 25, 1872.
February 13, 1873.
May 19, 1874, and as they will be in force in 1876.

Age of Children.—Length of Hours of Work.

Article 1. *Children* and young girls cannot be employed in factories, mills, mines, docks, and quarries, except under conditions determined by the present law. Children cannot be employed by masters or be admitted into factories, mills, or docks under 12 years of age.

Article 2. They can, however, be employed at the age of 10 years in works specially determined by a regulation of the public administration, sanctioned by the superior commission instituted here below.

Article 3. *Children under* 12 years cannot be made to work more than six hours a day, divided by a rest. Over 12 they cannot be employed more than 12 hours a day, divided by a rest.

Section 2.

Night-work.—Sundays and Holidays.

Article 4. *Children* cannot be employed in any night-work under the age of 16 years. The same prohibition applies to girls of from 16 to 21 years of age, but only in mills and factories.

All work between nine at night and five in the morning

cleaning or oiling any part of the factory, or any part of the machinery, or in any other labour whatsoever, save as herein-after excepted, is deemed to be employed. 7 Vict. c. 15. s. 73.

Mill gearing comprehends every shaft, whether upright, oblique, or horizontal, and every wheel, drum, or pulley by which the motion of the first moving power is communicated to any machine in a manufacturing process. 7 Vict. c. 15. s. 73.

Power of Inspectors or Sub-Inspectors.

Every inspector or sub-inspector has power to enter any factory when any person is employed therein, and any school in which children employed in factories are educated, and to take with him the certifying surgeon and any peace officer, and to examine every person whom he shall find in such factory or school, or whom he shall believe to have been employed in a factory within two months next preceding. And every person who shall refuse to be examined, or who shall refuse to sign his name or affix his mark to a declaration of the truth of the matters respecting which he shall have been examined by an inspector or sub-inspector, or who shall prevent or delay the admission of an inspector or sub-inspector to any part of a factory or school, is liable to a penalty of not less than 3*l.* nor more than 10*l.* 7 Vict. c. 15. ss. 3 and 61.

Abstract and Notices.

This abstract and the following notices, written or printed,

is called night-work. However, in case of stoppage resulting from an accidental and unavoidable interruption, the above prohibition may be temporarily removed by the local commission or the inspector during a period determined by them. But the employment of children under 12 in night-work shall not be permitted.

Article 5. Children under 16 years of age and young girls under 21 years of age cannot be employed by their masters on Sundays and holidays recognized by the law, not even in the tidying of the workshop.

Article 6. Notwithstanding, in mills where the fire should be kept up, children may be employed in indispensable work at night, or on Sundays or holidays.

This class of work and the time it should occupy shall be determined by a regulation of the public administration. This work shall not in any case be authorised except for children over 18 years of age at least. Time and liberty must be allowed them for religious duties.

Section 3.

Work in Mines, Coal Mines and Quarries.

Article 7. No child under 12 can be allowed to work underground in mines, coal mines, or quarries.

Women and girls cannot be employed in such work.

The special conditions of the work of children from 12 to 16 years of age in underground galleries shall be determined by a regulation of the public administration.

in legible characters, and fixed on moveable boards (each particular notice being signed by the occupier or his agent), must be hung up in the entrance of the factory, and so placed as to be easily read by the persons employed. 7 Vict. c. 15. s. 28 and Schedule C :—

1. The names and addresses of the inspector and sub-inspector of the district. 7 Vict. c. 15. s. 28. and Schedule C.

2. The name and address of the surgeon who grants certificates for the factory. 7 Vict. c. 15. s. 28, Schedule C.

3. A notice of the clock by which the hours of work are regulated, which clock must be a public clock, and approved by an inspector or sub-inspector. 7 Vict. c. 15. ss. 24 to 28, and Schedule C.

4. The hours during which the employment is fixed for children, young persons, and women. 37 & 38 Vict. c. 44. s. 9.

5. The times of the day and the amount of time allowed for meals. 7 Vict. c. 15. s. 18, Schedule C.

6. The manner of employment of children, whether in morning and afternoon sets, or on alternate days. 37 & 38 Vict. c. 44. s. 9.

In case any abstract or notice shall become illegible, the occupier must cause a new notice to be hung up. 7 Vict. c. 15. s. 28.

Registration.

No person under 18 years of age can be employed in any factory until his or her name has been registered. 3 & 4 Wm. 4. c. 103. s. 14, and 7 Vict. c. 15. s. 9, and Sched. B.

Special Conditions decreed 12th May 1875.

The employment of male children of from 12 to 16 years of age in the underground galleries of mines and quarries shall not exceed eight out of 24 hours, divided by a rest of an hour at least.

Children of 12 years of age shall not be employed in any work which is properly called that of a miner, such as cutting down timber, boring, or working in wood. They may be employed in packing and loading the mineral, in the working and running of the waggons, in the management and watching of the doors for ventilation, and also of hand ventilators, and other necessary work not beyond their strength. *Children* employed in managing the ventilators shall not be employed more than four hours, divided by a rest of not less than half an hour. In mines where the labour is actually regulated at the proportion of 10 hours a day, children may continue to work the same length of time, and under the conditions of Article 2 only up to the 1st of January 1868. After that date they may only work eight hours of the 24 according to Article 1.

This decree to be carried out by the Minister of Agriculture and Commerce.

Section 4.

Primary Instruction.

Article 8. No child under 12 can be employed by its master unless its parents or guardians certify that it actually attends some school either public or private. Any child employed

Surgical Certificates.

No person under 16 years of age can be employed without a surgical certificate. 3 & 4 Wm. 4. c. 103. s. 14. 7 Vict. c. 15. s. 9.

The inspectors are empowered to appoint certifying surgeons. 7 Vict. c. 15. s. 98.

A surgical certificate for each person under 16 must be obtained before employing the person for whom it is required, except that, when all surgical certificates for a factory are granted by the appointed certifying surgeon, persons may be employed without a surgical certificate for seven working days; or, when the certifying surgeon resides more than three miles from the factory, for 13 working days. 3 & 4 Wm. 4. c. 103. s. 11, and 7 Vict. c. 15. ss. 16 and 17.

Every inspector or sub-inspector may annul any surgical certificate if he shall have reason to believe the real age of the person mentioned therein to be less than that mentioned in the certificate. 7 Vict. c. 15. s. 14.

The inspector or sub-inspector must give to every person demanding it, a requisition entitling him on payment of 1*s.* to a certificate of the register of the birth or baptism of the party whose surgical certificate has been refused or annulled; except in consequence of deficient health or strength, or bodily infirmity. 7 Vict. c. 15. s. 13.

No person under 16 can be employed on proof of real age only. 7 Vict. c. 15. s. 15.

The occupier is to pay the certifying surgeon; but cannot deduct more than 3*d.* from the wages of the person for whom in a workshop must, up to that age, attend school during the hours in which it is not at work. It shall receive instruction for two hours at least. If a special school is attached to the manufactory the attendance at school shall be certified by means of a register drawn up by the schoolmaster and sent in every week to the employer.

Article 9. No child can be employed more than six hours a day who is under 15 years of age, unless a certificate from the schoolmaster or primary inspector can be produced, signed by the mayor to show that it has received primary elementary instruction.

This certificate shall be given on unstamped paper gratuitously.

Section 5.

The Overlooking of Children. —Management of Workshops.

Article 10. The mayors are bound to give to the father, mother, or guardian a book, in which shall be written the christian and surname of the child, the date and place of its birth, its home, and the time during which it went to school.

The heads of the manufactory or the master shall enter in this book the date of the child's coming to the workshop, and of its leaving. They must also keep a register of the points before mentioned in this clause.

Article 11. The masters shall be bound to fix up in each workshop a copy of the present law and of the regulations made by the public administration relative to carrying it out.

any surgical certificate may have been granted. 7 Vict. c. 15. s. 13.

Hours of Employment and Refreshment of Children, Young Persons, and Women.

No child under 10 years of age can be employed. 37 & 38 Vict. c. 44. s. 13, par *b*.

The period during which a child, young person, or woman may be employed shall be either the period between 6 a.m. and 6 p.m., or the period between 7 a.m. and 7 p.m. 37 & 38 Vict. c. 44. s. 3.

In a factory where the hours of work are fixed between 6 a.m. and 6 p.m., a child, young person, or woman shall not be employed except between those hours, nor continuously for more than four hours and a half without an interval of at least half an hour for a meal; and there shall be allowed between 6 a.m. and 6 p.m. on every day except Saturday, two hours for meals, of which one hour at the least shall be before 3 p.m. 37 & 38 Vict. c. 44. s. 4, subsection 3.

In a factory where the hours of work are fixed between 7 a.m. and 7 p.m., a child, young person, or woman shall not be employed except between those hours, nor continuously for more than four and a half hours, without an interval of at least half an hour for a meal; and there shall be allowed between 7 a.m. and 7 p.m. on every day, except Saturday, two hours for meals, of which one hour at the least shall be before 3 p.m. 37 & 38 Vict. c. 44. s. 5.

In a factory where the children are employed in morning

Article 12. The regulations of public administration shall determine the nature of the work presenting causes of danger, or exceeding their strength; on which work it shall be unlawful to employ children engaged in workshops.

Article 13. Children cannot be employed in the factories and workshops indicated in the special list of dangerous and unhealthy works, except under special conditions determined by a regulation of the public authority. This prohibition will be made generally applicable to all trades where the operator is exposed to effects or emanations injurious to his health.

Pending the publication of this rule, it is unlawful to employ children under the age of 16—

1st. In workshops where explosive matters are used, or where powder or combustibles are made, or anything which explodes by a shock, or by coming in contact with a flame.

2nd. In workshops used for the preparation or distillation, or use of corrosive or poisonous substances, and those which give off injurious and inflammable gases.

The same prohibition applies to dangerous and unhealthy trades, such as sharpening or dry polishing, polishing of articles of metal, glass, or crystal; the heating or dry scraping of carbonated leads; in the manufacture of white lead; the dry scraping of enamel, oxide of lead; in the manufacture of glass, or the silvering gilding of glass with mercury.

and afternoon sets, a child, who on any day except Saturday is employed before noon, shall not on the same day be employed after 1 p.m., or, if the hour of dinner be before 1 p.m., after such hour of dinner. 37 & 38 Vict. c. 44. s. 6. sub-s. 1.

In a factory where the children are employed on alternate days, a child may be employed during the same hours and with the same hours for meals, as young persons and women. And a child shall not be employed in any manner on two successive days. 37 & 38 Vict. c. 44. s. 6. sub-s. 2.

On Saturday; in a factory where the hours of work are on other days between 6 a.m. and 6 p.m., if not less than one hour is allowed for meals, a child, young person, or woman shall not be employed in any manufacturing process after 1 p.m., nor for any other purpose whatever after 1.30 p.m.; and if less than one hour is allowed for meals in such factory, a child, young person, or woman shall not be employed in any manufacturing process after 1.30 p.m., nor for any other purpose whatever after 2 p.m. 37 & 38 Vict. c. 44. s. 4.

On Saturday, in a factory, where the hours of work on other days are between 7 a.m. and 7 p.m., a child, young person, or woman shall not be employed in any manufacturing process after 1.30 p.m., nor for any other purpose whatever after 2 p.m. 37 & 38 Vict. c. 44. s. 5.

In a factory, where the children are employed on morning and afternoon sets, a child shall not be employed on Saturday in two successive

Article 14. The workshops must always be kept clean and properly ventilated. They must always be kept in that state of safety and healthiness which is necessary to the health of children.

Protection from Dangerous Machinery.

In mills where mechanical power is used, wheels, straps, or any other machinery offering a source of danger shall be guarded in such a manner that the workpeople shall not be able to come near except of necessity. Pits, trap-doors, and openings for descent must be fenced round.

Decree of the 17th May 1875.

Children under 16 years of age must not be employed in oiling, cleaning, examining, or repairing engines or machinery in motion. They must not be employed in this work when (the engines being stopped) the machinery has not ceased to move, at least unless the spindles or fliers have been previously stopped.

Children under 16 must not be employed on any work where there is machinery in motion, unless the dangerous and projecting parts of such machinery are fenced or otherwise guarded.

Children from 10 to 12 years of age, exceptionally authorised by the regulations of the 17th March 1875 to work at certain trades, must not be employed to carry weights or draw loads.

Children from the age of 12 to 14 must not carry loads on the head or back of more

weeks; nor on Saturday in any week, if on any other day in the same week such child has been employed for more than five hours. 37 & 38 Vict. c. 44. s. 6, sub-section, par *b*.

The period of employment of children, young persons, and women in any factory must be the same, and cannot be altered except by written notice to the Inspector or Sub-Inspector. 37 & 38 Vict. c. 44. s. 4, and s. 9.

No child, young person, or woman shall during any part of the time allowed for any meal be employed in a factory, or allowed to remain in any room in which any manufacturing process is being carried on, and any child, young person, or woman so employed, or allowed so to remain, shall be deemed to be illegally employed. The time allowed for meals shall be the same for all children, young persons, and women in any factory, except for special cause allowed in writing by an Inspector. 37 & 38 Vict. c. 44. ss. 7 & 8.

School Attendance and School Certificates.

The parent, or person having direct benefit from the wages of any child under 14 employed in a factory, must cause such child to attend school, unless such child, being 13 years of age, has obtained from a person duly authorised a certificate of having attained such standard of proficiency in reading, writing, and arithmetic, as may be from time to time prescribed for this purpose; in England,—by the Lords of the Committee of Privy Council on Education; than 10 kilogrammes in weight. Children from 14 to 16 years of age must not under the same conditions carry a weight of more than 15 kilogrammes.

It is not lawful to make children of 12 to 16 years of age to draw loads requiring greater strength than that which corresponds to the weight indicated in the preceding paragraph.

Children under 16 must not be employed in turning machinery by jumping on a pedal, neither may they be employed in turning horizontal wheels.

Children must not be employed in turning vertical wheels, or in producing motive force for longer than half a day, divided by a rest of an hour at least.

In workshops or factories where circular saws or ribbon saws are used, children under 16 may not be employed in placing the materials to be sawn in contact with the saw. Children under 16 may not be employed with shears or any machine with sharp blades.

Children of from 10 to 16 shall not be employed in glass-works in taking up the glass in the crucibles.

Children under 16 shall not be employed at or about steam pipes.

This Act will be enforced by the Minister of Agriculture and Commerce.

Given at Versailles, 13th May 1875.

MARSHAL MACMAHON,
Duke of Magenta.

Article 15. The master or heads of the factory shall endeavour to maintain good manners and decent behaviour in their works.

in Scotland—by the Lords of any Committee of the Privy Council on Education in Scotland; in Ireland—by the Lord Lieutenant, with the advice of his Privy Council. 7 Vict. c. 15. s. 38. 37 & 38 Vict. c. 44. s. 12.

Where children are employed in morning and afternoon sets, every child must attend school for three hours, between 8 a.m. and 6 p.m., on every working day except Saturday. But any child attending school between the 1st day of November and the last day of February after 1 p.m. is not required to remain in school more than 2½ hours. 7 Vict. c. 15. s. 38.

The non-attendance of any child is excused when he shall be certified by the schoolmaster to have been prevented from attending by sickness or other unavoidable cause.

When children are employed for 10 hours on three alternate days, they must attend school for five hours, between eight in the morning and six in the evening, on each week day except Saturday, preceding each day's employment. 7 Vict. c. 15. s. 31.

The occupier of every factory in which a child is employed must, on Monday, or other day appointed by an Inspector, obtain a certificate in the form required that such child has attended school during the foregone week, and must produce such certificate when required, and must pay for the education of each child such sum as the Inspector may require, not exceeding twopence weekly, and may deduct from the wages payable to such child any sum he shall have been required to

Section 6.

Inspection.

Article 16. To guarantee the execution of this law, 15 Inspectors will be nominated by Government from a presentation list drawn up by the High Commission under mentioned, and having three candidates for each office. Those Inspectors will be paid by the State. Each divisional Inspector will reside in one of the territorial divisions determined by a regulation of public administration, and over which he will exercise his surveillance.

Article 17. Those candidates will be eligible to the office of Inspectors who can lay claim to the title of state engineer, or to a diploma of civil engineer, as well as certificated pupils of the central school of the arts and manufactures, and of the school of mines.

Those shall be eligible who have filled during three years, at least, the office of Inspector of the Work of Children, or who can testify that they have during five years directed or overlooked works in which not less than 100 hands are employed.

Article 18. The Inspectors have the *entrée* of all manufactories, workshops, docks. They visit the children. They may require to see the register described in clause 10, the books, the school books, the regulations.

Infringements of the law shall be made known by the Inspectors, who shall prosecute and bring to justice, unless the contrary can be proved.

Two copies of the prosecution must be drawn up, one to be

pay, not exceeding one-twelfth part of such weekly wages. 7 Vict. c. 15. s. 39.

Attendance at a school in England which is not recognised by the Education Department as giving efficient elementary education shall not be deemed to be an attendance as hereinbefore required of any child employed in a factory, except in the case of a school in a school district, which has not been declared by the Education Department to be sufficiently provided with school accommodation, and except where there is not a school so recognised within two miles from the factory where the child is so employed; and the like provisions shall apply in Scotland. 37 & 38 Vict. c. 44. s. 15.

Holidays.

No child, young person, or woman can work in England, or Ireland on Christmas Day or Good Friday, or in Scotland on the Sacramental Fast days. Children, young persons, and women must also have eight half holidays besides in every year, together or separately, or four whole holidays, notice in every case being put up in the factory on the previous day. 3 & 4 Wm. 4. c. 103. s. 9; 7 Vict. c. 15. s. 37.

Lime-washing.

All inside walls, ceilings, or tops of rooms, whether plastered or not, and all passages or staircases, which have not been painted with oil once within seven years, must be limewashed once within every 14 months. All inside walls, ceilings, or tops of rooms, which are painted with oil, must be sent to the Prefect of the Department, the other to be lodged in the magistrate's office.

At all times when the Inspectors discover any factory or workshop in which any cause of danger or unhealthiness exists, they shall take the opinion of the under-mentioned Local Commission on the state of danger or unhealthiness, and they will cite this opinion in the prosecution.

The above rules do not detract from the regulations of the common law in relation to the proving and prosecution of offences against the present law.

Article 19. The Inspectors shall send in reports every year to the High Commission instituted below.

Section 7.

Local Commissions.

Article 20. Local Commissioners shall be established in each department, whose services shall be gratuitous, and their duties as follows:—

1. To see that the present law is carried out.

2. To control the office of Inspectors.

3. To address to the Prefects of the Departments reports on the state of the service and the execution of the law, which shall be transmitted to the Minister, and communicated to the High Commission.

To this effect the Local Commissioners shall visit the factories, workshops, and docks. A medical man shall accompany them whenever they think proper.

Article 21. The general council shall determine in each department the number and

washed with hot water and soap every 14 months. 7 Vict. c. 15. s. 19.

Dangerous Machinery and Accidents.

No person under 18 years of age, and no woman can be employed where the wet spinning of flax, hemp, jute, or tow is carried on, unless sufficient means be employed for protecting them from being wetted, or, where hot water is used, for preventing the escape of steam into the rooms. 7 Vict. c. 15. s. 19.

Every fly-wheel directly connected with the steam engine or water-wheel, whether in the engine-house or not, every part of a steam engine and water-wheel, and every hoist or teagle near to which children are liable to pass or be employed, and all those parts of the mill gearing with which children, young persons, and women are liable to come in contact, either in passing or in their ordinary occupation in the factory, must be securely fenced, and every wheel-race must be fenced close to the edge, and the said protection to each part must not be removed whilst the parts required to be fenced are in motion. 7 Vict. c. 15. ss. 21 and 73; 19 & 20 Vict. c. 38. s. 4.

Where notice in writing is given by an Inspector or Sub-Inspector that any part of the mill gearing or machinery, or any driving strap or band appears to him to be dangerous, and likely to cause bodily injury to the workers in the factory, and such as ought to be immediately fenced, the occupier must, within 14 days, securely fence the same. 7 Vict. c. 15. s. 43.

distribution of the local commissions. There shall be one, at least, in every district. They shall also be established in every manufacturing centre wherever it is judged necessary.

The general council can also nominate a special Inspector, to be paid by the department. This Inspector shall act under the Divisional Inspector.

Article 22. The local commission shall be composed of not less than five nor more than seven members, nominated by the prefect from a presentation list regulated by the general council.

If possible, each commission should contain a state engineer, or a civil engineer, an inspector of primary instruction, and an engineer of mines in mining districts.

Section 8.

The Higher Commission.

Article 23. A higher commission, composed of nine members, whose services shall be gratuitous, is established in connection with the Minister of Commerce. This commission is appointed by the President of the Republic. Its duties are—

1. The uniform and vigilant application of the present law.

2. To give its opinion on new regulations, and on any matter of importance to those who come under the protection of this law.

3. Finally to examine the list presentation of candidates for the post of divisional inspector.

Article 24. Every year the President of the High Commission shall send in a report to the President of the Republic on the results of inspection,

No child, young person, or woman can be allowed to clean any mill gearing while it is in motion, nor to work between the fixed and traversing part of any self-acting machine while the latter is in motion. 7 Vict. c. 15. s. 20.

The accidents, of which notice is required to be given to the certifying surgeon of a factory, are the following accidents only; that is to say:

1. Any accident which causes loss of life to any person employed in the factory.

2. Any accident which causes bodily injury to any person employed in the factory, and is produced by machinery, by explosion of gas, steam, or metal, and is of such a nature as to prevent the injured person from returning to his work in the factory within 48 hours after the occurrence of the accident.

And such notice shall be sent within 24 hours of such absence, and shall state the residence of the person injured or the place to which he may have been removed, and a copy of such notice shall be sent by the certifying surgeon to the Sub-Inspector of the district. 7 Vict. c. 15. s. 22, and 34 & 35 Vict. c. 104. s. 7.

Liability of Occupier.

The occupier of any factory, in which any offence has been committed, is in the first instance liable; but may have any agent, servant, or workman whom he shall charge as the actual offender brought by summons before the justices, and if, after the offence has been proved, the occupier shall prove that he had used due diligence to enforce the execution of the and the facts relating to the carrying out of the law generally.

This report shall be published, within a month of its being sent in, in the Journal Officiel. The Government will render accounts every year to the National Assembly of the execution of the law, and the publication of the rules of the public administration intended to complete it.

Penalties.

Article 25. The manufacturers, masters, or managers of works, who shall have infringed on the law, or the regulations of the public administration relative to its execution, shall be brought up before the correctional tribunal, and punished by a fine of from 16 francs to 60. The fines will be inflicted for each offence; each person employed contrary to the present law constituting an offence. The aggregate fine shall not exceed 500 francs. This penalty, however, shall not be inflicted if the manufacturer, manager, or master can prove that the infraction of the law was the result of an error caused by false certificates.

The remarks in clauses 12 and 13 of the law of 1854 on the certificates of workpeople will be applicable in this case to the authors of the false papers.

The heads of the factory are civilly responsible for the condemnation pronounced against their managers.

Repetition of Offences.

Article 26. If the offence is

Act, and that the agent, servant, or workman committed the offence without his knowledge, consent, or connivance, then such agent, servant, or workman shall be convicted instead of the occupier.

When it appears to the Inspector or Sub-Inspector that the occupier has used due diligence to enforce the law, and that an offence has been committed without his personal consent, connivance, or knowledge, and in contravention of his orders, the Inspector or Sub-Inspector must proceed against the person whom he shall believe to be the actual offender without proceeding against the occupier. 7 Vict. c. 15. s. 41.

Penalties.

Any person convicted of having employed any person contrary to the provisions of these Acts, or of having employed a child without a certificate from a schoolmaster when required, such person not being the parent or having any direct benefit from the wages of such child, is liable to a penalty of from two to five pounds. 7 Vict. c. 15. s. 56.

The parent or person having the direct benefit from the wages of any child or young person employed in any manner forbidden by these Acts, or who neglects to cause such child to attend a school, is liable to a penalty of from 5*s*. to 20*s*. for each offence. 7 Vict. c. 15. s. 57.

If a person suffers bodily injury in consequence of the occupier having neglected to guard anything required to be securely fenced, or having neglected to fence and keep fenced repeated, the manufacturers, managers, and their masters will be liable to a penalty of from 50 to 100 francs.

The united amount of the fines may not exceed 1,000 francs.

It is considered a repetition when the second offence has been committed within 12 months after a former fine has been inflicted.

Article 27. Notice of judgment according to the circumstances, and in case of repetition only, may be ordered by the Tribunal of Police Correctionelle. In the same case the Tribunal may direct the prosecution to be inserted in one or two of the papers of the department at the expense of the offender.

Obstruction of the Factory Officers.

Article 28. A fine of 60 francs to 100 francs will be inflicted on owners or masters who shall use any means to obstruct the inspectors, surgeons, engineers, or experts in the performance of their duties.

Article 29. Clause 463 of the penal code is applicable to judgments pronounced in virtue of the present law.

Section 10.

Special Resolutions.

Article 30. Clauses 2, 3, 4, and 5 of the present law are applicable to children who are employed in manufacture. The resolutions in Articles 18 and 25 above mentioned shall be applicable in the aforesaid case, inasmuch as they shall modify the power of the judge, and the

any part of the machinery or any driving strap or band, which he shall have received from an inspector or sub-inspector notice to fence, the occupier is liable to a penalty of from 10*l.* to 100*l.*, which may be applied for the benefit of the injured person or otherwise as the Secretary of State shall determine. 7 Vict. c. 15. ss. 43 and 60.

Every person making, giving, signing, countersigning, or making use of any certificate authorised or required by these Acts, knowing the same to be untrue, or wilfully making or wilfully conniving at the making any false or counterfeited certificate, or any false entry in any register or any other account, paper, or notice required by these Acts, and every person wilfully making and signing a false declaration on any proceedings under these Acts, is liable to a penalty of from 5*l.* to 20*l.*, or to be imprisoned for any time not more than six months. 7 Vict. c. 15. s. 63.

The penalty for any offence against these Acts for which no specific penalty is provided is from 2*l.* to 5*l.* 7 Vict. c. 15. s. 64.

Temporary exceptions.

Any child of 13 who previously to January 1st, 1876, was lawfully employed in a factory as a young person may continue to be so employed in the same factory. Any child of nine, who previously to January 1st, 1876, was lawfully employed in a factory, may continue to be so employed in the same factory. 37 & 38 Vict. c. 44. ss. 12 and 13.

In the winding and throwing of raw silk, any person, who

amount of the fine indicated in the first paragraph of clause 20 of the law of February 1851.

Article 31. By a transitory measure the resolutions made by the present law cannot be put in force till a year after its promulgation. At the same time children already legally admitted into workshops will continue to work there, under the condition specified in clause three.

Article 32. At the expiration of the above-mentioned time, all resolutions contrary to the present Act will become null and void, and remain so.

Discussed in public sittings at Versailles, 25th November 1872, 10th February 1873, and 19th May 1874.

President:

L. Buffet.

The employment of children is unlawful in the establishments named in the subjoined Table A. to this Act annexed. It is also unlawful in workshops where sharpening and dry polishing of metal goods and of glass and crystal is carried on. Children are authorised to work in establishments named in Schedule B., but only on the conditions named in the said schedule.

In the establishments included under the general head of dangerous, unhealthy, or otherwise improper trades, the employment of children is authorised without other conditions than those which are prescribed by the law of the 19th of May 1874, and by other laws and regulations on the subject,

previously to January 1877 was lawfully employed, may continue to be so employed, and until the 1st of January 1877 a child of the age of 12 years may be employed as a young person. 37 & 38 Vict. c. 44. s. 14.

Permanent exceptions as to Lace Factories.

A youth over 16 and under 18 years may be employed in a lace factory between 4 a.m. and 10 p.m. but—

a. Not for more than nine hours in one day when he is employed either earlier than 6 a.m. or later than 6 p.m.

b. Not both before 6 a.m. and after 6 p.m. on the same day:

c. Not both after 6 p.m. on one day and before 6 a.m. on the next day:

and under corresponding conditions where the hours elected are between seven and seven.

SCHEDULE A.

WORKS in which the EMPLOYMENT of CHILDREN is FORBIDDEN and the Reasons therefor.

WORKS.	Reasons for Interdict.
1. Public slaughter-houses - -	Danger of wounding.
2. Arsenical acid, manufacture of, by means of arsenious acid and azotic acid.	Danger of poison, and also of noxious vapours.
3. Acid, chlorohydric, by the decomposition of chlorines of magnesium, of aluminium, and others.	Corrosive emanations, and danger of accidents.
4. Acid, nitric - - -	Deleterious vapours.
5. Acid, oxalic - - -	„ „
6. Acid, picric - - -	„ „
7. Acid, sulphuric, manufacture of	Deleterious vapours, and danger of burns.

Works.	Reasons for Interdict.
8. Acid, murexide; manufacture of it in enclosed vessels by the reaction of azotic and uric acid of guano.	Deleterious vapours.
9. Alcohol, other than of wine, without the work of rectification.	Danger of fire.
10. Alcohol, agricultural distillery of.	,, ,,
11. Alcohol, rectification of	,, ,,
12. Arseniate of potash, manufacture of, by means of saltpetre.	Danger of poisoning, and deleterious vapours.
13. Benzine, manufacture and depôts of.	Danger of burning.
14. Blue, Prussian, manufacture of-	Noxious vapours.
15. Chloride, manufacture of -	,, ,,
16. Chloride of lime - -	,, ,,
17. Chloride, alkaline (Eau de Gavotte).	,, ,,
18. Chrysalides, extraction of silk from.	,, ,,
19. Copper, cleaning of, by acids -	,, ,,
20. Dogs hospital - - -	Danger of bites.
21. Distilleries in general—brandy, gin, kirsch.	———
22. Absinthe, and other alcoholitic liquors.	Danger of burning.
23. Æther, manufacture and depôts of, without distinction of class.	,, ,,
24. Enamel, application of, to metals.	Poisonous emanations.
25. Enamel, manufacture of, in non-fumiferous furnaces.	Injurious dust.
26. Fireworks, manufacture of	Danger of explosion and of burning.
27. Fuzes, explosive, manufacture of, without distinction of class.	,, ,,
28. Gilding and silvering of metal -	Danger of poison in the use of mercury, and of noxious vapours from the use of acids.
29. Glass, silvering of - -	Injurious vapours.
30. Gold, particles of, treated by lead.	,, ,,
31. Gutta-percha, making of, with essential oils and sulphur of carbon.	,, ,,

Works.	Reasons for Interdict.
32. Gutta-percha, application of layers of.	Injurious vapours.
33. Gun-wadding and gun-sights -	Danger of explosion and ignition.
34. Hides, tanning of - - -	Danger of igniting.
35. Lead, white, manufacture of -	Danger of poison.
36. Liquids for brightening purposes, by means of alcohol and essential oils.	Danger of igniting.
37. Lead, vitrified, manufacture of -	Danger of poison.
38. Massicot solution of lead -	" "
39. Melting and plating of lead, zinc, and copper.	Unhealthy emanations.
40. Mercurial powder, manufacture of.	Injurious vapours, danger of explosion.
41. Minium, manufacture of - Murexide. *See* Acid, uric.	Danger of poisoning.
42. Nitrate of iron, manufacture of	Noxious vapours.
43. Nitro-benzine, aniline, and matters derived from the manufacture of benzine.	" "
44. Oxide of lead, manufacture of -	Danger of poisoning.
45. Olive torteaux - - -	" "
46. Oil of petroleum, schist, pitch essences, and other hydrocarbonates, in brightening, in heating, in the manufacture of colours and varnish, in cleaning stuffs and other rags.	" "
47. Potash, chromate of, manufacture of.	Special diseases resulting from emanations from.
48. Potash, ashes of - - -	Danger of poisoning.
49. Potassium, cyanide of, and Prussian blue, manufacture of.	Unhealthy vapours.
50. Potassium, red cyanide of, or red prussiate of.	Danger of poison.
51. Phosphorus, manufacture of -	Injurious vapours.
52. Powdering of drugs (mechanical).	Noxious and occasionally poisonous dust.
53. Powder and explosive matters, manufacture of.	Danger of explosion and ignition.
54. Quartering of animals - -	Danger of accidents.
55. Refining of gold and silver -	Danger of corrosive vapours.
56. Rags, stores of - - -	Injurious dust.
57. Red, Prussian and English -	Noxious emanations.
58. Skins of hares and rabbits, curing of.	Unwholesome emanations and dust.

Works.	Reasons for Interdict.
59. Salt of soda, manufacture of, with sulphate of soda.	Corrosive vapours.
60. Sulphate of mercury, manufacture of.	„ „
61. Sulphate of peroxide of iron, manufacture of, by sulphate of protoxide of iron and nitric acid.	Deleterious vapours.
62. Sulphate of protoxide of iron, or green copperas, by the action of sulphuric acid on the iron.	Irritating vapours, and danger of poison.
63. Sulphate of soda, manufacture of.	Inhaling corrosive particles.
64. Sulphur of carbon, depôts of. *See* Petroleum, oil of.	
65. Sulphur of carbon, manufactures in which it is employed.	Noxious vapours, and danger of fire.
66. Waterproof silk and cloth, manufacture of.	Danger of ignition.
67. Varnish, spirits of wine, manufacture of.	„ „
68. Varnish, works where it is applied to leather, cloth, or gun-wadding.	

SCHEDULE B.

Trades in which the Employment of Children is Permitted under certain Conditions. of these are also forbidden.

1. Beating, carding, and purifying of wool, horsehair, and feather bedding.
   Forbidden in places where the dust arising from the work flies freely.
2. Beating of carpets.
   Forbidden where the dust flies freely.
3. Bleaching.
   Forbidden in places where chloride or sulphuric acid is given off.
4. Button making and other moulding of metal by machinery.
   Forbidden where the dust flies freely.
5. Cement, burning of.
   Forbidden where the dust arising from the grinding and sifting flies freely.

6. China, manufacture of.
   Forbidden where enamel is used, and where dust arises from grinding and sifting.
7. Cotton, bleaching of waste.
   Forbidden where sulphur of carbon is used.
8. Crystal and glass manufacture.
   Forbidden where the dust flies freely, or where poisonous matters are used.
9. Dyeing.
   Forbidden where poisonous matters are used.
10. Dyeing of skins.
    Forbidden where poisonous matters are used.
11. Enamelled earthenware.
    Forbidden where poisonous matters are used.
12. Felt, tarred, manufacture of.
    Forbidden where the dust flies freely.
13. Flax, heckling, and hemp and jute to a large extent.
    Forbidden in places where the dust flies freely.
14. Hemp, heckling and manufacturing of, in large quantities.
    Forbidden where the heckling is done by machinery.
15. Hats, felt, manufacture of.
    Forbidden where the dust from the preparation of hair, silk, &c. flies freely.
16. Hats of silk prepared by means of a varnish, manufacture of.
    Forbidden in places where they prepare or apply the varnish.
17. Hair, horse and pigs', preparation of, without fermentation.
    Forbidden where the dust arising from the operation flies freely.
18. Limekilns.
    Forbidden where the dust from grinding and sifting flies freely.
19. Liquids, fatty, extraction of, for the manufacture of soap and other usages for the oil contained in them.
    Forbidden where sulphur of carbon is employed.
20. Matches, manufacture of, with detonating and explosive materials.
    Forbidden in places where the paste is melted and the matches dipped; allowed elsewhere, but only during 6 hours out of the 24.
21. Menageries.
    Forbidden where the menagerie contains savage or ravenous animals.
22. Mills to crush plaster, lime, flint, and porcelain stone.
    Forbidden where the dust flies freely.
23. Mineral black, manufacture of, by pounding the residue of the distillation of bituminous schist.
    Forbidden where the dust flies freely.
24. Paper, manufacture of.
    Forbidden in the sorting and preparing of rags.
25. Pipes with which to smoke, manufacture of.
    Forbidden where dust flies freely

26. Porcelain, manufacture of.
    Forbidden where the dust arising from grinding and sifting flies freely.
27. Pottery, earthenware, manufacture of, with non-fumiferous furnaces.
    Forbidden where the dust arising from grinding and sifting flies freely.
28. Pouzzolane, artificial, of furnaces, &c.
    Forbidden where dust arising from grinding and sifting flies freely.
29. Pigs' hair, preparation of.
    Forbidden where the dust from beating flies freely.
30. Printed and coloured stuffs, manufacture of.
    Forbidden where poisonous matters are used.
31. Strings for instruments, &c. made from animals.
    Forbidden to employ children at blowing; danger of pulmonary disease.
32. Spinning from cocoons, where carried on largely.
    Forbidden to employ children extracting the silk particles from the chrysalis.
33. Sulphur, pulverization and sifting of.
    Forbidden where the dust flies freely.
34. Superphosphate of lime and potash, manufacture of.
    Forbidden where the dust flies freely from the operation, or vapours from the use of acids.
35. Sheet-iron and varnished metals.
    Forbidden where poisonous matters are used.
36. Tobacco and snuff manufacture.
    Forbidden where quantities are pounded.
37. Tan mills.
    Forbidden where the dust flies freely.
38. Tanneries.
    Forbidden where the dust flies freely.
39. Wadding, manufacture of.
    Forbidden where the dust flies freely.

The following gentlemen have been appointed by me certifying surgeons during the past half-year :—

FOR ENGLAND.

Torquay.—H. W. Chilcote, Esq.
Kirkoswald.—Reginald Dudley, Esq.
Accrington.—Dr. Clayton.
Holsworthy.—L. Ash, Esq.
Nuneaton.—A. N. Cookson, Esq.
Bridgwater.—Thos. Parsons, Esq.
Portsmouth.—J. N. Way, Esq.
Rocester.—Geo. Greenslade, Esq.

FOR IRELAND.

Cellbridge.—Wm. White, Esq.
Middleton.—W. Lawlin, Esq.

I have the honour to be,
Sir,
Your most obedient servant,
ROBERT BAKER,
Inspector of Factories
and Workshops.

To the Right Honourable
the Secretary of State for
the Home Department.

Appendix No. 1.

Note.—The Prosecution cases under the Factories Acts, and under the Workshop Regulation Acts, 1867 and 1871, are given *separately*. The Workshop cases in Mr. Baker's Division will be found at page 152 of his Report.]

Return of Prosecutions for Offences against the Factories and Workshops Regulation Acts, in the District of Robert Baker, Esq., Inspector of Factories and Workshops, for the Six Months ended 30th April 1875.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	Remarks.
1875.			*Informations laid by Mr. Buller.*	£ s. d.	£ s. d.	
Jan. 27	Edwin Jeffries (parent), Chard.	G. T. Canning, Esq. (Mayor), Town Hall, Chard.	Allowing his son, under 13, to be employed without causing him to attend school.	- -	0 7 0	Withdrawn on payment of costs, on account of poverty of Defendant.
Feb. 8	Jno. Berry and Sons, Buckfast, near Buckfastleigh.	S. E. Cary, Rd. Durant, R. H. Watson, Esqs., and Major Trist, Guildhall, Totnes.	Employing seven females after 6 o'clock p.m.	- -	2 7 0	Withdrawn on payment of costs. The foreman having, in the absence of Defendant, sanctioned the overworking for the purpose of making up time lost during the day.
"	William Tape (parent), Buckfastleigh.	" "	Allowing his son, under 13, to be employed without causing him duly to attend school.	- -	0 6 0	Withdrawn on payment of costs, on account of poverty of Defendant.
"	Jno. Roper (parent), Buckfastleigh.	" "	Allowing his son, under 13, to be employed without causing him duly to attend school.	- -	0 6 0	Withdrawn on payment of costs, on account of poverty of Defendant.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*	£ s. d.	£ s. d.	
Nov. 5	North Staffordshire Brick and Tile Company, Ld., Chesterton.	H. C. Greenwood, Esq., Stipendiary, Tunstall.	Employing three young persons and one child without registering their names.	14 0 0		
"	" "	" "	Employing three young persons and one child without surgical certificates.	14 0 0	7 2 6	
"	" "	" "	Employing a child without a school certificate -	2 0 0		
" 11	Joseph Bamford, Macclesfield.	W. Carr and G. Goodwin, Esqs., Macclesfield.	Employing two females and 12 young persons for more than five hours without a meal time.	3 0 0	6 0 6	The full penalty imposed in one case, and the other cases withdrawn on payment of costs, by desire of the Bench.
" 18	Patrick Corcoran, Longton	H. C. Greenwood, Esq., Stipendiary, Longton.	Permitting his child to be employed before noon and after 1 p.m. on the same day.	0 5 0	0 14 6	
"	" "	" "	Neglecting to send his child to school - -	- -	0 3 6	Withdrawn on payment of costs.
" 20	Ann Clay, Stoke-on-Trent	H. C. Greenwood, Esq., Stipendiary, Fenton.	Neglecting to send her child to school - -	- -	- -	Withdrawn on account of poverty.
" 30	Thomas Yoxall, Congléton	Jnc. Kennesley and Jno. Hall, Esqs., Congleton.	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	0 5 0	0 8 6	
"	Thomas Broadhurst, Congleton.	" "	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	0 5 0	0 8 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
Nov. 30	Allen Wainwright, Congleton.	Jno. Kennesley and Jno. Hall, Esqs., Congleton.	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	0 5 0	0 8 6	
„	Mary Jolly, Congleton -	„ „	Allowing her child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	Joseph Slater, Congleton -	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	John Dempsey, Congleton	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	Peter Cooke, Congleton -	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	Withdrawn on payment of costs.
„	Margaret Kinsey, Congleton.	„ „	Allowing her child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	James Hayes, Congleton -	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	Thomas Challinor, Congleton.	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	0 5 0	
„	Henry Shaw, Congleton -	„ „	Allowing his child to be employed full time, under 11 years of age, in a silk mill.	- -	- -	Withdrawn.
„	Ralph Tweates, Congleton	„ „	Allowing his child to be employed full time, under 13 years of age, in fustian cutting.	0 5 0	0 13 6	
„	„ „	„ „	Neglecting to send his child to school - -	0 5 0		

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
Nov. 30	John Pemberton, Congleton.	Jno. Kennesley and Jno. Hall, Esqs., Congleton.	Neglecting to send his child to school	0 5 0	0 8 6	
„	John Madden, Congleton	„ „	Neglecting to send his child to school	0 5 0	0 8 6	
Dec. 4	James Wright, Stoke-on-Trent.	H. C. Greenwood, Esq., Stipendiary, Fenton.	Employing a child after 2 p.m. on Saturday	1 10 0	1 13 6	
„	„ „	„ „	Employing a child after 2 p.m. on Saturday	- -	0 9 6	Withdrawn on payment of costs.
„	„ „	„ „	Employing a child after 2 p.m. on Saturday	- -	0 9 6	
1875. Jan. 26	John Brock, Burslem	H. C. Greenwood, Esq., Stipendiary, Burslem.	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 19 6	
Feb. 4	Joseph Cotterill, Tunstall	H. C. Greenwood, Esq., Stipendiary, Tunstall.	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 15 6	
„	Ford and Challinor, Sandyford.	„ „	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 17 6	
„	„ „	„ „	Employing a child without a school certificate	- -	- -	Withdrawn.
„	S. Baggaley, Tunstall	„ „	Employing two children before noon and after 1 p.m. on the same day.	1 0 0	0 15 6	One case withdrawn.
Mar. 2	George Sutton, Burslem	H. C. Greenwood, Esq., Stipendiary, Burslem.	Employing a child before noon and after 1 p.m. on the same day.	1 0 0	0 17 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Capt. May, R.N.*—cont.	£ s. d.	£ s. d.	
Mar. 19	Thos. Warrilow, Stoke-on-Trent.	H. C. Greenwood, Esq., Stipendiary, Stoke-on-Trent.	Neglecting to send his child to school - -	0 5 0	1 6 6	
April 6	George Maitland, Burslem	H. C. Greenwood, Esq., Stipendiary, Burslem.	Permitting his child to be employed before noon and after 1 p.m. on the same day.	0 5 0	0 7 0	
1874.			*Informations laid by Mr. Beadon.*			
Nov. 6	T. T. Doswell, printer, Saint Peter Street.	W. Budden, W. W. Bulpett, Esqs., Dr. Hitchcock, F. Moorshead, and Ch. Fielder, Esqs., Winchester.	Employing a child without school certificate -	1 0 0	0 11 6	
"	" "	" "	Employing a child without surgeon's certificate -	- -	0 4 6	One case withdrawn.
1875.						
Feb. 9	Geo. Cash, iron founder, &c., Portsea.	And. Nance, R. Marvin, and Jno. Baker, Esqs., Portsmouth.	Employing a young person after 2 p.m. on Saturday.	1 0 0	0 12 6	
"	" "	" "	Employing a young person over seven days without surgeon's certificate.	- -	0 14 6	One case withdrawn.
			Informations laid by Mr. Godfrey-Faussett.			
Feb. 26	T. S. Davies, parent - -	G. S. Dickinson, J. W. Hallewell, and J. C. Little, Esqs.	Allowing his child to be employed both before noon and after 1 o'clock on the 29th January.	0 5 0	0 9 0	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Godfrey-Faussett*-cont.	£ s. d.	£ s. d.	
Feb. 26	T. S. Davies, parent -	G. S. Dickinson, J. W. Hallewell, and J. C. Little, Esqs.	Not causing his child to attend school on the 29th January.	- -	0 3 6	Dismissed. Costs paid by the Crown. These cases were greatly aggravated by the fact that full-time employment for the child was obtained by a certificate that, as was pointed out to the Bench, had been evidently tampered with. The magistrates, however, in the first case inflicted the minimum penalty, and dismissed the second,—at first on the grounds that, as the child "could "not be in two places "at once," the offences were "identical," and on its being urged that the offences were of a widely different nature,—then on the grounds that they objected to "charges "being multiplied."

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp.*	£ s. d.	£ s. d.	
Nov. 21	William Green, foreman, Phœnix Bolt Works, Handsworth.	Charles Ratcliff and J. Kempson, Esqs., West Bromwich Police Court.	Employing a child before noon and after 1 o'clock on the same day.	- -	0 10 0	Foreman summoned instead of occupier, because latter had cautioned him the very day I called. Payment of costs considered sufficient.
"	Henry Vanes, Handsworth	" "	Neglecting to cause his child to attend school -	0 5 0	0 15 0	
Dec. 9	J. and A. Bullows, iron founders, Walsall.	J. Newman and J. Anderson, Esqs., Guildhall, Walsall.	Employing child who had been "refused" - -	- -	0 4 6	Owing to mistake on part of magistrates clerk, no offence was charged. Rather than take out fresh summonses I consented to withdraw both charges on payment of costs by Defendant. These mistakes arise from our not having our own printed "informations" as formerly.
"	" "	" "	Employing child who had been "refused" -	- -	0 4 6	
"	John Lowe, lock maker, Walsall.	" "	Failing to produce a surgical certificate for young person.	1 0 0	0 11 0	Withdrawn on payment of costs by Defendant. Fine in one case deemed sufficient.
"	" "	" "	Failing to produce a surgical certificate for young person.	- -	0 6 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
Dec. 9	Henry Hateley, brass founder, Walsall.	J. Newman and J. Anderson, Esqs., Guildhall, Walsall.	Not entering name in register of young persons -	1 0 0	0 11 0	Withdrawn on payment of costs by Defendant. Fine in one case deemed sufficient.
"	" "	" "	Failing to produce surgical certificate - -	- -	0 6 6	
"	Saml. Brookes, collier, Walsall.	" "	Neglecting to cause his child to attend school -	0 5 0	0 11 0	
"	John Wright, blacksmith, Walsall.	" "	Neglecting to cause his child to attend school -	- -	0 4 0	Owing to poverty of parent, withdrawn on payment of costs.
"	Edward Holden, caster at Messrs. Bullows' Foundry, Walsall.	" "	Obstructing the Sub-Inspector in the discharge of his duties, by sending the child out of the way.	- -	0 6 6	Magistrates were prepared to convict, but thought that even the lowest penalty was heavy for a working man. I therefore consented to ask no penalty. Defendant expressed regret, paid the costs, and was cautioned by Bench.
1875.						
Feb. 16	John Davis, roller at Bloomfield Ironworks, Tipton.	Isaac Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Employing a child "in the night" - -	2 0 0	0 19 6	
"	William Price, puddler, Tipton.	" "	Allowing his child to work "in the night" - -	0 5 0	0 12 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Blenkinsopp*—cont.	£ s. d.	£ s. d.	
Feb. 16	James Marston, collier, Tipton.	Isaac Spooner, Esq., Stipendiary, Police Court, Wednesbury.	Allowing his child to work "in the night" -	0 5 0	0 9 6	Or 14 days.
„ 24	David Broadhurst, buckle maker, Walsall.	J. Newman and H. Highway, Esqs., Guildhall, Walsall.	Failing to produce a school certificate - -	2 0 0	0 11 0	
„	Smith, Birch, and Co., iron founders, Walsall.	„ „	Employing a young person after 7 p.m. - -	1 0 0	0 11 0	
„	„ „	„ „	Employing a young person after 7 p.m. - -	1 0 0	0 11 0	
„	Daniel Kelly, labourer, Walsall.	„ „	Allowing his son to work after 7 p.m. - - -	0 5 0	0 11 0	
„	Wm. Green, caster, Walsall.	„ „	Allowing his son to work after 7 p.m. - -	0 5 0	0 11 0	
„	Joseph Guest, iron founder, Walsall.	„ „	Employing a young person at 8.45 p.m. - -	2 0 0	0 11 0	
„	„ „	„ „	Employing a young person at 8.45 p.m. - -	1 0 0	0 11 0	
„	James Moffatt, collier, Walsall.	„ „	Allowing his son to work after 7 p.m. - -	0 5 0	0 11 0	Or six days.
„	Martin Griffin, fitter, Walsall.	„ „	Allowing his son to work after 7 p.m. - -	0 5 0	0 11 0	Or six days.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Johnston.*	£ s. d.	£ s. d.	
Nov. 13	John Hopkins - -	J. D. Goodman and Chas. Sturge, Esqs.	Suffering his child to be employed for more than 6½ hours and not causing him to attend school.	0 5 0	- -	Without costs, 12*s.* 6*d.*
„	John Chater, Pool Street, Aston.	„ „	Similar offence - - - - -	- -	0 10 0	Fined in costs only.
Dec. 17	Joseph Smith, Darwin Street.	Alderman Manton and Chas. Sturge, Esqs.	Similar offence - - -	0 5 0	0 12 6	
„	George Holmes, Angelina Street.	„ „	Similar offence - - -	0 5 0	- -	Without costs, 12*s.* 6*d.*
„ 23	Metropolitan Railway Carriage Co., Saltley.	J. Smallwood, T. E. Boughton, and J. D. Goodman, Esqs., Aston Petty Sessions.	Employing three male young persons without surgical certificates.	6 0 0	2 3 6	
„ 24	Chamberlain, King, and Jones, upholsterers, Union Street.	Chas. Sturge and Henry Wiggin, Esqs.	Employing nine females after 7 at night on December 15th.	20 0 0	8 14 6	
	„ „	„ „	Similar offence on December 16th - - -			
1875. Jan. 8	Samuel Heath, brass founder, Leopold Street.	J. D. Goodman and Chas. Sturge, Esqs.	Employing two male children without surgical certificates.	4 0 0	1 5 6	
„	„ „	„ „	Employing two male children for more than 6½ hours.	2 0 0	1 5 6	
„	Daniel Day, 51, Alcester Street.	„ „	Suffering his child to be employed as above -	0 5 0	0 10 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Johnston*—cont.	£ s. d.	£ s. d.	
Jan. 8	Martin Egan, 44A, Cheapside.	J. D. Goodman and Chas. Sturge, Esqs.	Similar offence - - - - -	- -	- -	Dismissed, on the ground that they had only been illegally employed for a day or two, and that during the Christmas holidays.
"	William Fellows, 22A, Barford Street.	" "	Similar offence - - - - -	- -	- -	
Feb. 5	Clews, Bros., Coventry Street.	Chas. Sturge and Henry Richards, Esqs.	Employing a male child for more than 6½ hours on 22nd January.	1 0 0	0 12 6	
"	Thomas Boswell, Cookshill, Aston.	" "	Suffering his child to be employed as above - -	0 5 0	0 12 6	
April 16	Fredk. Fitter, 130, Larches Street.	" "	Similar offence on 2nd April - - -	0 10 0	0 12 6	
"	Enoch Fellows, 33, Charles Henry Street.	" "	Similar offence on 8th April - - -	- -	- -	Withdrawn on account of the serious illness of Defendant.
1874.			*Informations laid by Mr. Cramp.*			
Nov. 5	James Beads, cotton manufacturer, Willows Mill, Accrington.	George Walmsley, Esq., J.P., W. E. Taylor, Esq., J.P., John Mercer, Esq., J.P., and Rev. R. E. Taylor, J.P., Accrington Petty Sessions.	Employing a female young person after 6 p.m. on October 14th.	1 0 0	0 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Nov. 5	James Beads, cotton manufacturer, Willows Mill, Accrington.	George Walmsley, Esq., J.P., W. E. Taylor, Esq., J.P., John Mercer, Esq., J.P., and Rev. R. E. Taylor, J.P., Accrington Petty Sessions.	Employing a female young person after 6 p.m. on October 14th.	- -	0 10 6	Withdrawn on payment of costs, at the request of the Magistrates.
„ 9	John Nuttall and Sons, cotton manufacturers, Turn Mills, Shuttleworth, Ramsbottom.	Major Walker, J.P., and T. L. Openshaw, Esq., J.P., Bury Petty Sessions.	Employing four women after 6 p.m. on Oct. 22nd	5 0 0	2 18 6	
„ 12	James Birch (parent), iron founder, 3, Back Cooper Street, Bolton.	John Green, Esq., J.P., and W. H. Wright, Esq., J.P., Bolton Town Hall.	Neglecting to cause his child to attend school -	0 5 0	0 16 6	
„ 16	William Neville (parent), labourer, 4, Prince Albert Street, Blackburn.	James Johnston, Esq., J.P., Edward Wharton, Esq., J.P., Richard Shackleton, Esq., J.P., and A. S. Bury, Esq., J.P., Blackburn Town Hall.	Neglecting to cause his child to attend school -	0 10 0	0 11 0	Or 14 days imprisonment.
„	Susannah Turner (parent), 8, Sharples Street, Blackburn.	„ „	Neglecting to cause her child to attend school -	0 10 0	0 11 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Dec. 19	Jameson, Markland, and Co., Shakespeare Iron Works, Breightmet Street, Bolton.	Richard Stockdale, Esq., J.P., John Green, Esq., J.P., and Dr. Livy, J.P., Bolton Town Hall.	Employing a child before 12 noon and after 1 p.m. on December 11th.	1 0 0	0 11 6	
"	" " "	" "	Employing a child without certificate of his attendance at school.	- -	0 5 6	Withdrawn on payment of costs.
"	Francis Crook (parent), iron moulder, 2, Oswald Street, Bolton.	" "	Neglecting to cause his child to attend school -	0 5 0	0 16 6	Or seven days imprisonment.
"	John Keeley (parent), glass blower, Howell Croft, Bolton.	" "	Neglecting to cause his child to attend school -	0 5 0	0 12 6	
"	Thomas Thornley (parent), mill overlooker, 116, Noble Street, Bolton.	" "	Neglecting to cause his child to attend school -	0 5 0	0 13 6	
"	Martin Finnegan (parent), bus inspector, 105, Blackhorse Street, Bolton.	" "	Neglecting to cause his child to attend school -	0 5 0	0 12 6	
" 21	Brotherton and Co., Moorside Mill, Ainsworth, near Bolton.	Col. Hutchinson, J.P., and T. L. Openshaw, Esq., J.P., Bury Petty Sessions.	Employing five women during the dinner hour on December 7th.	5 0 0	2 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Dec. 21	Brotherton and Co., Moorside Mill, Ainsworth, near Bolton.	Col. Hutchinson, J.P., and T. L. Openshaw, Esq., J.P., Bolton Petty Sessions.	Employing five women during the dinner hour on December 7th.	- -	2 0 0	At the suggestion of Magistrates I withdrew five cases upon payment of costs.
„ 22	Thomas Potter, Victoria Boiler Works, Wensley Street, Blackburn.	Dr. Grime, J.P., and T. Higson, Esq., J.P., Blackburn Borough Court.	Employing a child without surgical certificate -	2 0 0	0 12 6	
„	„ „	„ „	Employing a child without a certificate of his attendance at school.	1 0 0	0 9 0	
„	James Lang, 4, Ouzehead Lane, Blackburn.	„ „	Neglecting to cause his child to attend school -	0 5 0	0 11 0	
„	William Murphy (parent), labourer, 8, Chapel Street, Blackburn.	„ „	Neglecting to cause his child to attend school -	- -	0 5 0	Withdrawn on payment of costs, at the urgent request of the chairman, on account of the Defendant's poverty, and the recent death of his wife.
„ 23	Birtwistle and Fielding, cotton manufacturers, St. Lawrence Mill, Great Harwood, near Accrington.	Joseph Harrison, Esq., J.P., James Johnston, Esq., J.P., James Briggs, Esq., J.P., and John Fish, Esq., J.P., Blackburn County Police Office.	Employing two women cleaning machinery during the dinner hour on December 9th.	2 0 0	1 5 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Dec. 31	Joseph Whittle (parent), mechanic, 18, Grecian Crescent, Bolton.	Richard Stockdale, Esq., J.P., Bolton Town Hall.	Neglecting to cause his child to attend school	0 5 0	0 19 6	Or seven days imprisonment.
1875. Jan. 5	John Wassick (parent), 83, Captain Nolan Street, Blackburn.	Dr. Grime, J.P., T. Higson, Esq., J.P., and T. H. Pickup, Esq., J.P., Blackburn Borough Court.	Neglecting to cause his child to attend school	0 10 0	0 17 0	Fine and costs heavy, owing to Defendant falsely stating that child was ill in bed, thereby causing two adjournments.
Feb. 13	James Bland, bookbinder, 26, Bridge Street, Bolton.	Charles Taylor, Esq., J.P., and Richard Stockdale, Esq., J.P., Bolton Town Hall.	Employing a child before 12 noon and after 1 p.m. on January 27th.	- -	- -	Dismissed for want of evidence of boy's age, although the boy stated on oath "that "he would not be 13 "until next July, and "that he was a half-"timer and attended "school." Adjournment refused.
„ 17	Edward Hopkins, cabinet maker, 3, B.R. William Henry Street, Blackburn.	Thomas Bury, Esq., J.P., Edward Wharton, Esq., J.P., and Aaron Bury, Esq., J.P., Blackburn Borough Court.	Neglecting to cause his child to attend school	0 10 0	0 12 6	
Mar. 18	Charles Heaton, cotton spinner, Great Lever Mill, Bolton.	Henry Lee, Esq., J.P., and Alfred Topp, Esq., J.P., Bolton County Police Office.	Employing a child without a certificate o his attendance at school.	- -	- -	Offence transferred to manager of mill, Thomas Davenport.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
Mar. 18	Thomas Davenport, mill manager, Great Lever Mill, Bolton.	Henry Lee, Esq., J.P., and Alfred Topp, Esq., J.P., Bolton County Police Office.	Employing a child without a certificate of his attendance at school.	1 0 0	0 13 6	
„	Hannah Forrest (parent), factory worker, 14, Brick Street, Bolton.	„ „	Neglecting to cause her child to attend school -	- -	0 5 6	Withdrawn on payment of costs.
„ 22	James Harter, overlooker in mill, 4, Sunnyside Street, Daubhill, Bolton.	John Harwood, Esq., J.P., and W. H. Wright, Esq., J.P., Bolton Town Hall.	Neglecting to cause his child to attend school -	0 10 0	0 11 6	
„ 25	James Marsden and Sons, cotton spinners, Albion Mills, Bolton.	William Makant, Esq., J.P., and Richard Stockdale, Esq., J.P., Bolton Town Hall.	Employing two children during the dinner hour on March 5th.	2 0 0	1 3 0	
„	„ „	„ „	Employing a woman during the dinner hour on March 5th.	1 0 0	0 13 6	
„	„ „	„ „	Employing two children during the dinner hour on March 5th.	- -	0 15 0	
April 1	Accrington Cotton Spinning and Manufacturing Co., Wood Nook, Accrington.	W. E. Taylor, Esq., J.P., and A. S. Gatty, Esq., J.P., Accrington Petty Sessions.	Employing two women during the dinner hour on March 12th.	2 0 0	1 0 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Cramp*—cont.	£ s. d.	£ s. d.	
April 12	James Whittaker, cotton spinner, Shipton Mill, Halliwell, near Bolton.	T. R. Bridson, Esq., J.P., and W. B. Whittam, Esq., J.P., Bolton County Police Office.	Employing a child without a certificate of her attendance at school.	1 0 0	0 12 6	
"	James Keogh (parent), slater, 15, Lord Street, Brownlow Fold, near Bolton.	" "	Neglecting to cause his child to attend school -	0 10 0	0 10 0	Or 14 days imprisonment.
" 26	William Cleary, news agent, 6, White Lion Brow, Bolton.	Thomas Walmsley, Esq., J.P., George Fell, Esq., J.P., and T. R. Bridson, Esq., J.P., Bolton Town Hall.	Neglecting to cause his child to attend school -	0 10 0	0 14 6	This man put his boy to work half-time, in order that he might, as he said, "defy the "School Board," by whom he had been prosecuted and fined three times.
" 29	E. Shorrock, Brother, and Co., cotton manufacturers, New Mill, Over Darwen.	Rev. P. Graham, J.P., and James Dimmock, Esq., J.P., Darwen Petty Sessions.	Employing a woman during the dinner hour on April 9th.	1 10 0	0 12 6	
"	" "	" "	Employing a young person during the dinner hour on April 9th.	1 10 0	0 12 6	
"	" "	" "	Employing a child during the dinner hour on April 9th.	1 10 0	0 12	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold.*	£ s. d.	£ s. d.	
Nov. 25	Pearson, Henry, and Co., cotton spinners, Chestergate, Stockport.	Col. Wilkinson and Stephen Christy, Esq., The Court House, Stockport.	Employing a female after 6 p.m.	1 0 0	0 15 6	
"	" "	" "	Employing a female after 6 p.m.	1 0 0	0 15 6	
"	" "	" "	Employing a female after 6 p.m.	1 0 0	0 15 6	
"	" "	" "	Employing two other females	- -	1 11 0	Withdrawn, defendant paying costs.
"	Robert Orme, cotton spinner, Shaw Heath, Stockport.	" "	Employing a female during the time set apart for breakfast.	1 0 0	0 15 6	
"	" "	" "	Employing a child during the time set apart for breakfast.	1 0 0	0 15 6	
"	Hulley, George, Stockport	" "	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 7 6	
Dec. 3	Fernyhough, J., calico printer, Cheadle.	Cephas Howard and Stephen Christy, Esqs., Stockport.	Employing a girl under 13 on full time	1 0 0	0 11 0	
"	" "	" "	Employing a boy, under 13, without certificate of school attendance.	1 0 0	0 11 0	
"	Eagland, Daniel, Cheadle	" "	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 6 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
Dec. 3	Baker, George, picker maker, Cheadle.	Cephas Howard and Stephen Christy, Esqs., Stockport.	Neglecting to cause his child, employed in a factory, to attend school.	0 5 0	0 6 6	
1875. Mar. 10	Moorhouse, Samuel, and Son, cotton doublers, Stockport.	Col. Wilkinson and Capt. Howard.	Employing a male young person during meal time	1 0 0	0 11 6	
„ 16	Kenyon, James, engine fitter, Crewe.	Rev. W. Ffolliott and Wilbraham Tollemache, Esq., Crewe.	Neglecting to cause his child, employed in a factory, to attend school.	0 5 0	0 9 0	
„ 24	Dickins and Co., cotton doublers, Stockport.	Dr. Rayner and Cephas Howard, Esqs., Stockport.	Employing a male young person in a manufacturing process after 12.30 p.m. on Saturday.	1 0 0	0 9 6	
„	„ „	„ „	Employing another male young person in a manufacturing process after 12.30 p.m. on Saturday.	1 0 0	0 9 6	
„	„ „	„ „	Employing two females in a manufacturing process after 12.30 p.m. on Saturday.	2 0 0	0 19 0	
„	Kershaw, Leese, and Co., cotton spinners and weavers, Stockport.	„ „	Employing a female on Saturday after 1 p.m.	1 0 0	0 11 6	
„	„ „	„ „	Employing a child on Saturday who had worked the whole of the previous Friday.	1 0 0	1 0 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Bignold*—cont.	£ s. d.	£ s. d.	
April 22	Ashton, Richard, and Co., fire brick makers, Buckley, Hawarden.	Meadows, Frost, and W. Johnson, Esqs., Broughton, Flintshire.	Employing a child without a certificate of school attendance.	1 10 0	0 7 6	
„	Lamb, James, Buckley -	„ „	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 7 6	
„ 27	Catherall, Wm., and Co., fire brick makers, Mold.	Capt. Phillips and I. Wynne Eyton, Esqs., Mold, Flintshire.	Employing a child without a certificate of school attendance.	1 10 0	0 7 6	
„	Jones, Wm., engineer, Buckley.	„ „	Neglecting to cause his child employed in a factory to attend school.	0 5 0	0 7 6	
1874.			*Informations laid by Mr. Mostyn.*			
Nov. 18	S. F. Harris, Llanover Factory.	F. Copel, H. Williams, and R. Rees, Esqs., Abergavenny.	Employing a child without registration - -	2 0 0	0 10 6	
„	„ „	„ „	Employing a child without registration - -	- -	0 6 0	Withdrawn on payment of costs at Magistrates suggestion.
„	Edwin Morgan, Abergavenny.	„ „	Employing a child without registration - -	- -	0 6 0	Being offender's own child, case withdrawn on payment of costs, at the urgent solicitation of the Bench.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Mostyn*—cont.	£ s. d.	£ s. d.	
Nov. 30	Hodges and Gardner, Brecon.	W. Games and J. Joseph, Esqs., Town Hall, Brecon.	Employing a young person without registration -	2 0 0	0 9 6	
"	" "	" "	Employing a young person without a surgical certificate.	- -	0 5 6	Withdrawn at Magistrates' suggestion on payment of costs.
1875. Jan. 2	Morriston Tin Plate Co., Morriston.	G. Francis and N. P. Cameron, Esqs., Swan-	Employing a young person without a surgical certificate.	2 0 0	0 14 3	
" 13	Marshfield and Co., Ld., Llanelly.	C. Nevill, Esq., M.P., and J. Buckley, Esq., Llanelly.	Employing three young persons without registration.	6 0 0	1 6 0	
"	" "	" "	Employing three young persons without surgical certificates.	6 0 0	1 6 0	
Feb. 17	George Broom, Llanelly -	W. H. Nevill and C. N. Phillips, Esqs., Llanelly.	Employing one young person and one child without surgical certificates.	5 0 0	1 1 0	
"	" "	" "	Employing a child without having registered the date of first employment.	2 10 0	0 11 0	
			Information laid by Mr. Striedinger.			
Jan. 22	E. Smith and Co., letter press printers, Bicester.	E. S. Harrison, Esq., Lord Jersey, and Lieut.-Col. Hibbert, County Petty Sessions, Bicester.	Employing two young persons after 2 o'clock, until 7, on Saturday afternoon.	2 0 0	1 0 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Bowling.*	£ s. d.	£ s. d.	
Nov. 14	Walter Smith, Stour Street, Birmingham.	J. D. Goodman and C. Sturge, Esqs., Birmingham.	Not causing his child to attend school - -	0 5 0	0 15 0	
Dec. 24	T. Wright, Winson Green Road.	H. Wiggin and C. Sturge, Esqs.	Same offence - - - - -	0 5 0	0 12 6	
1875. Jan. 29	Hugh McMahon, Birmingham.	J. D. Goodman and G. Goodrick, Esqs.	Same offence - - - - -	0 5 0	0 12 6	Without costs.
„	Jas. Stokes, Birmingham -	„ „	Same offence - - - -	0 5 0	0 12 6	Without costs.
„	Josiah Griffiths, Birmingham.	„ „	Same offence - - - - -	- -	0 9 0	Withdrawn. It appearing that the mother was very ill, and the child kept at home to nurse her.
Feb. 19	Maria Simpson, Hanley Street.	J. D. Goodman and H. Richards, Esqs.	Same offence - - - -	0 5 0	0 12 6	Passed full time in October 1874.
„	Wm. Smith, Lee Bank Road.	„ „	Same offence - - - - -	- -	0 10 6	Withdrawn. It was proved that there were two John Smiths and two Mary Smiths the parents of two John Smiths, and I got hold of the wrong set of Smiths.

RETURN OF PROSECUTIONS—*continued.*

Date	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
Feb. 26	Richard Redman, New Edmund Street.	J. D. Goodman and H. Richards, Esqs.	Employing a child without surgical certificate	2 0 0	0 11 0	
"	" "	" "	Employing a child in the forenoon and afternoon	1 0 0	0 13 6	
"	" "	" "	Employing a child without registration	1 0 0	0 13 6	
"	" "	" "	Same offence	1 0 0	0 11 0	
"	" "	" "	Employing a young person without a surgical certificate.	2 0 0	0 13 6	
"	Levi Fryer, Birmingham	" "	Not causing his child to attend school	- -	0 6 6	Withdrawn.
Mar. 13	John Aston and Co., St. Paul's Square.	C. Sturge and H. Richards, Esqs.	Not producing a school certificate when required to do so by the Sub-Inspector of Factories.	1 0 0	0 10 0	
"	" "	" "	Same offence	1 0 0	0 12 6	
"	" "	" "	Same offence	1 0 0	0 12 6	
"	" "	" "	Same offence	1 0 0	0 12 6	
"	" "	" "	Same offence	1 0 0	0 12 6	
"	" "	" "	Same offence	1 0 0	0 12 6	
"	" "	" "	Employing a child under 8 years of age	3 0 0	0 10 0	
"	" "	" "	Being the occupier of a factory in which a child was employed for more than 6½ hours.	3 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
Mar. 13	David Butler, Brass Street	C. Sturge and H. Richards, Esqs.	The parent of the child under 8 years, who was employed as above.	0 7 6	0 10 0	
„	Mary Ann Hobbins, Aston's Button Works.	„ „	Being a workwoman and agent at Aston's factory, that she employed a child for more than 6½ hours.	-	0 6 6	Withdrawn on payment of costs.
„ 12	Bent and Parker, Newhall Street.	„ „	Employing a child without a surgical certificate -	3 0 0	0 12 6	
„	„ „	„ „	Employing a child in the forenoon and afternoon	1 0 0	0 12 6	
„	„ „	„ „	Same offence in another case -	1 0 0	0 10 0	
„	Solomon Cohen, Hill Street.	„ „	Not causing his child to attend school - -	0 10 0	0 10 0	Or 14 days.
„ 25	J. Bunting, Blews Terrace	E. C. Osborne and C. Ratcliff, Esqs.	Same offence - - - - -	0 5 0	- -	Without costs.
„	James Broughton, Hill Street.	„ „	Same offence - - - - -	0 5 0	0 12 6	
„	T. Yeomans, Clark Street	„ „	Same offence - - - - -	0 5 0	- -	Without costs.
„	Wm. Matson, Warstone Lane.	„	Same offence - - -	0 5 0	- -	Without costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
Mar. 25	A. Wilkins, New John Street West.	E. C. Osborne and C. Ratcliffe, Esqs.	Forging a certificate of his attendance at school -	- -	0 9 0	Withdrawn on payment of costs. His mother promising that he would be better looked after in future.
April 2	J. R. Boyce, Newhall Hill	E. C. Osborne and T. Cheshire, Esqs.	Being the occupier of a factory in which a child was employed both in the morning and afternoon.	1 0 0	0 10 0	
"	Hubert Gallagher, Birmingham.	" "	Not causing his child to attend school - -	- -	0 6 6	Withdrawn on payment of costs. The father being ill and out of work.
			Informations laid by Mr. Meade-King.			
Jan. 13	George Duchart, engineer, Trumpet Street, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
"	" "	" "	Employing same child before noon and after 1 o'clock in the afternoon of the same day.	1 0 0	0 11 6	
"	The Calico-Printing Engraving Company (Limited), Hulme Street, Manchester.	" "	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
"	" "	" "	Employing another child without a surgical certificate.	1 0 0	0 11 6	

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
Jan. 20	Robert Cooke, letter-press printer, Newmarket Lane, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
"	" "	" "	Employing same child before noon and after one o'clock in the afternoon of the same day.	- -	0 11 6	Withdrawn on payment of costs by the Defendant.
Feb. 12	Hugh Macdonald, Finishing Works, Back South Parade, Manchester.	" "	Employing a young person, under 16 years of age, without having obtained a surgical certificate.	1 0 0	0 11 6	
"	" "	" "	Employing a young person, under 16 years of age, without having obtained a surgical certificate.	1 0 0	0 11 6	
"	" "	" "	Employing a young person, under 18 years of age, without having entered his name in the proper register.	1 0 0	0 11 6	
" 23	Joseph Verdin and Sons, salt manufacturers, Marston, Cheshire.	G. J. Shakerley, T. H. Marshall, and O. P. Leigh, Esqs., Petty Sessions, Northwich.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	2 13 0	
"	" "	" "	Employing a child without having obtained a certificate of attendance at school.	1 0 0		
"	" "	" "	Employing a child without having obtained a surgical certificate.	1 0 0		

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
Feb. 23	Joseph Verdin and Sons, salt manufacturers, Marston, Cheshire.	G. J. Shakerley, T. H. Marshall, and O. P. Leigh, Esqs., Petty Sessions, Northwich.	Employing a child without having obtained a surgical certificate.	1 0 0		
	" "	" "	Employing a child before noon and after one o'clock in the afternoon of the same day.	1 0 0		
"	" "	" "	Employing a young person without having entered his name in the proper register.	1 0 0		
" 24	John Jackson and Co., makers-up and packers, 75, George Street, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child, under 13 years of age, for more than 6½ hours in one day.	2 0 0	0 11 6	
"	" "	" "	Employing a child without having obtained a certificate of attendance at school.	2 0 0	0 11 6	
"	" "	" "	Employing a young person without a surgical tificate.	2 0 0	0 11 6	
"	" "	" "	Obstructing a Sub-Inspector of Factories in the execution of the powers entrusted to him by the Factory Acts.	- -	- -	The Sub-Inspector was unable to gain admission from 9.35 p.m. until 10.15. pm. It was argued in defence that the repeated knocks at the doors and windows were not

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	heard by the people within. The Stipendiary Magistrate dismissed the case in default of proof that the admission sought was *knowingly* delayed.
Mar. 3	Williamson, Bros., warehouse, Minshall Street, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child without having obtained a surgical certificate.	2 0 0	0 11 6	
"	" "	" "	Employing a child without having obtained a certificate of attendance at school.	2 0 0	0 11 6	
"	Edwd. Brettell, Thornton Court, Tickle Street, Manchester.	" "	Conniving at the illegal employment of his son, and neglecting to cause him to attend school.	0 10 0	0 8 6	This boy has been found working in five factories and workshops "full-time" during the last two years, and was nearly killed by falling down a hoist in Nov. 1873. The father was committed to gaol for seven days in default of payment of the amount of penalty.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Meade-King*—cont.	£ s. d.	£ s. d.	
Mar. 3	Freeman and Collier, mediæval metal workers, Brook Street, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a young person without having entered his name in the proper register.	2 0 0	0 11 6	
"	" "	" "	Employing a young person, under the age of 16 years, without having obtained a surgical certificate.	2 0 0	0 11 6	
"	James Cole, fustian cutter, 28, Back Queen Street.	" "	Employing a female after 7 o'clock in the evening	2 0 0	0 11 6	
"	" "	" "	Employing a female after 7 o'clock in the evening	- -	0 9 0	Withdrawn on payment of costs by the Defendant.
"	" "	" "	Employing a female after 7 o'clock in the evening	- -	0 9 0	
"	" "	" "	Employing a female after 7 o'clock in the evening	- -	0 9 0	
1874.			*Informations laid by Mr. Cooke Taylor.*			
Dec. 8	Baxendale and Heald, waggon builders, Chorley.	John Rigby and G. H. Lightoller, Esqs.	Employing a young person after 6 p.m. - -	1 0 0	0 14 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS
1874.			*Informations laid by Cooke Taylor*—cont.	£ s. d.	£ s. d.	
Dec. 8	Baxendale and Heald, waggon builders, Chorley.	John Rigby and G. H. Lightoller, Esqs.	Employing a young person after 6 p.m.	- -	0 10 6	Case dismissed. The boy was a foreigner, and his father produced a written entry in a book of some sort to prove that he was 18 years of age. The Magistrates accepted this as proof of age.
1875.						
Jan. 23	Stephen Cook, cotton operative, Caton.	J. P. C. Starkie, M.P., and Thomas Howitt, Esq.	Allowing his child to be employed over 6½ hours in one day.	0 5 0	0 17 4½	
"	John Sanderson, cotton operative, Caton.	" "	Allowing his child to be employed over 6½ hours in one day.	0 5 0	0 16 4½	
"	Thomas Massick, cotton operative, Caton.	" "	Allowing his child to be employed over 6½ hours in one day.	0 5 0	0 16 4½	
"	John Dowthwaite, cotton operative, Caton.	" "	Allowing his child to be employed over 6½ hours in one day.	0 5 0	0 16 4½	
"	Joseph Robinson, cotton operative, Caton.	" "	Allowing his child to be employed over 6½ hours in one day.	0 5 0	0 16 4½	
April 15	Livesey and Haydock, cotton factory, Garstang.	Major Cunliffe and R. C. Gardner, Esq.	Not limewashing their factory within a period of 14 months.	3 0 0	0 9 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Jones.*	£ s. d.	£ s. d.	
Dec. 23	Isaac Malin, toller employed at Messrs. G. B. Thorneycroft and Co., Swan Gardens, Wolverhampton.	Isaac Spooner, Esq., Stipendiary.	For employing a child during the night	2 0 0	0 11 0	
"	Samuel Wilkinson, York Street, Wolverhampton.	" "	For allowing his son to work during the night	1 0 0	0 11 0	
"	Thos. Brown, Charles Street, Wolverhampton.	" "	For allowing his son to work during the night	1 0 0	0 11 0	
			Informations laid by Mr. Cameron.			
Nov. 16	John Emerson Priestly, Marlow Mill, near Ballymena.	John Young, Esq., D.L., and — Montgomery, Esq., R.M., Ballymena Petty Sessions Court.	For employing three children, under the age of 13 years, without school certificates.	6 0 0	2 0 0	
"	" "	" "	For employing three children, under the age of 13 years, without surgical certificates.			
" 19	Bells, Calvert, and Co., Whitehouse Mill, Whitehouse, near Belfast.	Sir C. Lanyon, Bart., and Sir Edward Coey, D.L., &c., Whitehouse Petty Sessions Court.	For employing eight children, under the age of 13 years, before noon and after one of the clock in afternoon of same day.	8 0 0	0 16 0	
Dec. 3	Robert Stewart and Sons, Lisburn Flax Spinning Mills, Lisburn.	Wm. Lyons, Esq., D.L., and the Resident Magistrate, &c., Lisburn Petty Sessions Court.	For employing seven children, under the age of 13 years, before noon and after one of the clock in afternoon of same day.	7 0 0	0 19 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Cameron*—cont.	£ s. d.	£ s. d.	
Dec. 22	The Smithfield Spinning Company, Limited, Vine Tavern Street Mill, Belfast.	The Mayor and Dr. Brown, Belfast Petty Sessions Court.	For employing three children, under the age of 13 years, before noon and after one of the clock in afternoon of same day.	7 0 0	1 1 7	
"	" "	" "	For employing five young persons of doubtful age without surgical certificates.			
1875.						
Feb. 12	The Milport Spinning Co., Milport Mill, Belfast.	J. C. O'Donnell, Esq., R.M., Belfast Petty Sessions Court.	For employing 25 women in a manufacturing process after 1 o'clock on Saturday afternoon.	15 0 0	5 4 6	Ten of these informations were withdrawn on payment of costs.
" 19	Messrs. Lawrence Bros., Bann Mills, Coleraine.	Dr. Sharpe and Dr. Carsm, Coleraine Petty Sessions Court.	For employing five children, under the age of 13 years, without school certificates.	5 0 0	0 17 6	
1874.			*Informations laid by Mr. Richmond.*			
Dec. 17	The Liverpool Sugar Refinery Co., Ford Street, Liverpool.	E. Whitley and G. Arkle, Esqs., Liverpool Borough Court.	Neglecting to report a fatal accident - -	2 0 0	0 6 6	
"	Kitchen, Head, and Co., lead rollers, Paisley Street, Liverpool.	" "	Employing three boys without having registered their names and date of first day of employment.	6 0 0	0 19 6	The same boys were found at work in October; when the Defendants were cautioned.
"	" "	" "	Employing two boys without surgical certificates	- -	0 9 0	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
Dec. 17	Dunlop, Hislop, and Co., engineers, Bentinck Street, Liverpool.	E. Whitley and G. Arkle, Esqs., Liverpool Borough Court.	Employing two boys without surgical certificates	2 0 0	0 13 0	The Defendants were cautioned about the same two boys in October.
"	C. Carter, engineer, Buckingham Street, Liverpool.	" "	Employing a boy without a surgical certificate -	1 0 0	0 6 6	The Defendant had been cautioned about the same boy in October.
" 19	George Aspery, fustian cutter, Hopwood Street, Warrington.	W. Nield and C. J. Holmes, Esqs., Warrington Borough Court.	Employing three children before noon and after 1 o'clock.	3 0 0	1 8 6	The children employed in the morning were in the habit of returning to work after afternoon school.
1875.						
Feb. 18	William Bruce, engineer, 186, Regent Road, Liverpool.	E. Whitley and J. Whitty, Esqs., Liverpool Borough Court.	Employing a boy without having registered his name and date of first day of employment.	2 0 0	0 6 6	The Defendant had been warned about these and other boys in November.
"	" "	" "	Employing two boys without surgical certificates	2 0 0	0 11 0	
" 22	The Lowton Cotton Spinning Co., Lowton, Newton-le-Willows.	Caleb Wright and Thomas Lee, Esqs., Leigh Petty Sessions.	Employing a child during the dinner hour -	3 0 0	0 11 0	
"	" "	" "	Employing five children during the dinner hour -	- -	2 15 0	Withdrawn on payment of costs.
Mar. 15	John Davies, bolt maker, Chowbent.	Caleb Wright and J. Heyes, Esqs., Leigh Petty Sessions.	Employing a child without school certificate -	1 0 0	0 16 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
Mar. 15	John Davies, bolt maker, Chowbent.	Caleb Wright and J. Heyes, Esqs., Leigh Petty Sessions.	Employing a boy without a surgical certificate -	1 0 0	0 16 0	
"	" "	" "	Employing a boy without having registered his name.	- -	0 10 6	Withdrawn on payment of costs.
"	" "	" "	Employing a boy without a surgical certificate -	- -	0 10 6	Withdrawn on payment of costs.
April 2	Reuben Stretford, Warrington.	S. Chandley and J. R. Pickmere, Esqs., Warrington Borough Court.	Neglecting to send his child to school - -	- -	0 6 6	Withdrawn on payment of costs. The proceedings having had the desired effect of causing the child to attend school.
" 26	The Runcorn Soap and Alkali Co., Runcorn.	Rev. E. A. P. Campbell and R. M. Brooke, Esq., Runcorn Petty Sessions.	Employing two children without having registered their names and date of first day of employment.	4 0 0	1 3 0	These cases were twice adjourned. The attorney for the defence at first frightened my witnesses, who were the parents of the children, into refusing to give evidence, by telling them that they would be prosecuted if they criminated themselves by allowing that the children were under 13 years of age.
"	" "	" "	Employing a child without a surgical certificate -	2 0 0	1 0 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Richmond*—cont.	£ s. d.	£ s. d.	
April 26	The Runcorn Soap and Alkali Co., Runcorn.	Rev. E. A. P. Campbell and R. M. Brooke, Esq., Runcorn Petty Sessions.	Employing two children without school certificates	2 0 0	2 4 0	Owing to this questionable proceeding on the part of the attorney, I declined to withdraw any of the cases, as he requested.
1874.			*Informations laid by Mr. Hoare.*			
Nov. 13	Brennan and Co., (Lim.), weavers, dyers, &c., Piercy Street, Manchester.	F. H. Headlam, Esq., Stipendiary, City Police Court, Manchester.	Failing to keep their hoist securely fenced - -	- -	0 9 0	The Magistrate declined to convict, but said he considered I was justified in bringing the case before him, and he thought the Defendants should pay the costs.
„ 24	John Gibb and Sons, cotton spinners, Moorside Mill, Worsley.	T. Dickins and J. L. Becker, Esqs., County Police Court, Manchester.	Employing a woman during meal hours - -	1 0 0	0 15 0	
„	„ „	„ „	Employing a woman during meal hours - -	- -	0 7 0	Dismissed. The witness stating she was not working.
„	„ „	„ „	Employing two young persons during meal hours	2 0 0	1 10 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Nov. 24	John Gibb and Sons, cotton spinners, Moorside Mill, Worsley.	T. Dickins and J. L. Becker, Esqs., County Police Court, Manchester.	Employing a young person during meal hours	- -	0 7 0	Dismissed. The witness stating he was only *playing* at cleaning the rollers and being corroborated by his father.
Dec. 15	Butterworth Bros., glass manufacturers, Newton Heath.	T. Dickins and Henry Newall, Esqs., County Police Court, Manchester.	Failing to obtain surgical certificates for two young persons.	2 0 0	1 5 0	
„	James Kemp, fustian cutter, Miles Platting.	„ „	Employing three females after 7 p.m.	2 0 0	1 6 6	I asked for one penalty and accepted the costs and a promise of amendment in the other two cases.
„	Bencke and Sharman, cotton spinners, Failsworth.	„ „	Employing two young persons during meal hours	2 0 0	1 5 0	
„	„ „	„ „	Employing a child both before noon and after 1 p.m. of the same day.	1 0 0	0 12 6	
„ 17	Wm. Taylor, Church Street, Middleton.	T. Dickins and S. Mallalieu, Esqs., Police Court, Middleton.	Conniving at the employment of his child both before noon and after 1 p.m. of the same day.	1 0 0	0 12 6	Or one month's imprisonment.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Dec. 30	Butler Green Cotton Spinning Co., (Lim.), Butler Green.	J. Rowland, jun., and Thos. Saville, Esqs., Police Court, Royton.	Employing four young persons after 6 p.m. - -	8 0 0	3 4 0	
"	Butterworth and Murgatroyd, cotton spinners, Hollinwood.	" "	Employing four females during meal hours -	4 0 0	3 0	
"	" "	" "	Employing one female during meal hours - -	- -	0 11 6	Dismissed. The Bench not considering the evidence of employment sufficient.
"	" "	" "	Employing one young person during meal hours -	1 0 0	0 16 0	
"	" "	" "	Employing one young person during meal hours -	- -	0 11 6	The young person's name appeared in the register and he looked about 16, but proved he was 18. Case dismissed.
"	" "	" "	Employing one young person during meal hours -	- -	0 11 6	Withdrawn. The Defendants proving the young person was only replacing cops upset by boys in larking.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Feb. 25	The Bury and Heap Coml. Co., (Lim.), cotton spinners, Elton, Bury.	Lieut.-Col. Hutchinson and J. L. Openshaw, Esq., Town Hall, Bury.	Employing a child without a school certificate for the foregone week.	1 0 0	0 11 0	
,,	Wm. Tomlinson, Woodhill, Bury.	,, ,,	Failing to cause his child to attend school - -	0 5 0	0 14 0	Or seven days imprisonment.
,,	George Yates, mule minder, 3, Audley Street.	,, ,,	Allowing a child to work between the fixed and traversing part of a self-acting machine when in motion.	- - -	0 15 6	On Defendant pleading guilty, promising not to offend again, and paying the costs, I did not press for a penalty.
Mar. 4	Walker Norris, Adelphi Dye Works, Salford.	Sir J. I. Mantell and W. W. Goulden, Esq., Town Hall, Salford.	Neglecting to report a fatal accident to the surgeon of the district.	2 0 0	1 0 6	
,,	H. Snape and Sons, letter-press printers, Chapel Street, Salford.	,, ,,	Neglecting to report an accident to the surgeon of the district.	2 0 0	1 7 6	
,, 8	John Heap, letter-press printer, Union Square, Bury.	Jonathan Mellor and Edwin Wrigley, Esqs., Town Hall, Bury.	Failing to obtain surgical certificates for two young persons.	2 0 0	1 8 0	
,,	Robert Kay, waste manufacturer, Doctor's Lane, Bury.	,, ,,	Failing to securely fence mill-gearing; viz., an upright shaft.	5 0 0	0 19 0	
,,	Samuel Kay, letter-press printer, Heywood.	,, ,,	Employing a child for more than 6½ hours in one day.	1 0 0	0 16 0	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Mar. 8	Thos. Taylor, Birch, Heywood.	Jonathan Mellor and Edwin Wrigley, Esqs., Town Hall, Bury.	Conniving at the above illegal employment of his child.	0 10 0	0 11 0	
„ 11	Jos. Leach and Co., brass founders, Farnworth.	C. Briggs and H. Cross, Esqs., Police Court, Little Bolton.	Failing to obtain a surgical certificate for a child	1 0 0	0 14 0	
„ 25	John Roberts, letter-press printer, Salford.	J. F. Mart and W. W. Goulden, Esqs., Town Hall, Salford.	Failing to obtain a surgical certificate for a young person.	1 0 0	0 11 6	
„	Renshaw and Co., flax spinners, Adelphi, Salford.	„ „	Employing five women before 6 a.m.	„ „	0 12 6	Two cases dismissed on the women stating they were not at work. In another, the woman admitted being at work contrary to the instructions of her employers. *On this evidence*, the Bench considered the Defendants had used due diligence to carry out the Acts, exonerated them, and dismissed the case, telling me I might summons the woman; though I called their attention to 7 & 8 Vict. c. 15. s. 41. After this I did not attempt to go on with remaining cases.

RETURN OF PROSECUTIONS—*continued*.

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
April 1	Crook Brothers, cotton spinners, Moses Gate, Bolton.	— Hargreaves and — Crook, Esqs., Police Court, Little Bolton.	Employing two young persons after 5.30 p.m.	2 0 0	1 3 0	
"	" "	" "	Employing five young persons after 5.30 p.m.	- - -	2 0 0	Withdrawn, on the Defendants pleading guilty, expressing regret, and paying the costs.
"	" "	" "	Employing one woman after 5.30 p.m.	- - -	0 9 0	
" 29	Olive Brothers, paper makers, Woolfold, Bury.	Lieut.-Col. Hutchinson and Crompton Hulton, Esq., Town Hall, Bury.	Failing to produce six months school certificates for a child.	2 0 0	0 12 6	
"	" "	" "	Failing to obtain a surgical certificate for a child -	1 0 0	0 12 6	
"	" "	" "	Failing to obtain a surgical certificate for a young person.	1 0 0	0 12 6	
"	" "	" "	Employing a child without registering her name -	1 0 0	0 12 6	
"	George Roberts, Woolfold, Bury.	" "	Failing to cause his step-daughter to attend school	0 10 0	0 10 0	
			Information laid by Mr. Brewer.			
Feb. 16	Joseph Weston, Gibbet Lane, Hales Owen.	F. L. Smith, E. Gem, and H. Howard, Esqs.	For neglecting to cause his child to attend school though employed in the button factory of James Grove.	0 5 0	0 11 6	Second time of being summoned; first time withdrawn on payment of costs. The father being only a labourer, I did not press.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Maitland.*	£ s. d.	£ s. d.	
Nov. 16	Henry Lowe, printer, Liverpool Road, St. Helen's.	F. W. Earle and H. S. Hall, Esqs., County Court, St. Helen's.	Employing a child without having entered his name in the register.	2 0 0	0 9 0	
"	" "	" "	Employing the same child without having obtained a surgical certificate.	- -	0 7 0	Withdrawn on payment of costs.
"	" "	" "	Employing the same child without having obtained a certificate of school attendance.	- -	0 7 0	Withdrawn on payment of costs.
" 20	Benson and Holme, printers, &c., Tower Gardens, Liverpool.	J. A. Picton and J. Roberts, Esqs., Dale Street Police Court, Liverpool.	Employing 10 females after 10 p.m. on Saturday 31st October.	2 0 0	3 5 0	Nine cases withdrawn on payment of costs.
Dec. 4	James Smith, collier, Hindley.	Jonathan Lamb, Esq., and T. Knowles, Esq., M.P., County Police Court, Wigan.	Neglecting to cause his child, employed in the factory of A. Pennington, Hindley, to attend school.	1 0 0	1 7 0	This child had passed for "*full-time*" on a forged certificate of baptism.
" 16	Messrs. Hignett Bros., tobacco manufacturers, 66, Whitechapel, Liverpool.	T. S. Raffles, Esq., Stipendiary, Dale Street Police Court, Liverpool.	Neglecting to report a fatal accident - -	2 0 0	0 6 6	
" 17	Messrs. Taylor Bros., cotton spinners, Wigan.	T. Wall and R. Burland, Esqs., Police Court, Wigan.	Employing 20 women after 6 o'clock in the evening on the 25th November.	20 0 0	8 14 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Maitland*—cont.	£ s. d.	£ s. d.	
Jan. 14	Messrs. Eckersley, Sons, and Co., cotton spinners, Wigan.	James Burrows and Ralph Hilton, Esqs., Police Court, Wigan.	Employing five females after 6 o'clock in the evening on 10th December 1874.	4 0 0	2 5 0	One case withdrawn on payment of costs.
Feb. 1	William Foreman, printer, 28, Church Street, St. Helen's.	T. Pilkington, Esq., and Dr. Twyford, Police Court, St. Helen's.	Employing a child without having entered his name in the register.	2 0 0	0 6 6	
"	" "	" "	Employing the same child without having obtained a surgical certificate.	1 0 0	0 6 6	
"	" "	" "	Employing a young person without having entered his name in the register.	2 0 0	0 6 6	
"	" "	" "	Employing the same young person without having obtained a surgical certificate, he being under the age of 16 years.	1 0 0	0 6 6	
April 2	Ince Hall Rolling Mills Co., Lower Ince, near Wigan.	James Gidlow and A. Smethurst, Esqs.	Employing a child without having obtained a surgical certificate.	1 0 0	0 19 0	
"	" "	" "	Employing another child, at night, without having obtained a surgical certificate.	2 0 0	0 19 0	
"	" "	" "	Employing two other children at night	- - -	1 18 0	Withdrawn on payment of costs at the suggestion of the Magistrates.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Capt. Cairns.*	£ s. d.	£ s. d.	
Feb. 6	Isaac Franklin, Bridge Street.	J. Jaffray and T. Avery, Esqs.	Conniving at the illegal employment of his child and neglecting to cause him to attend school.	0 5 0	0 17 0	Fine only imposed. Costs paid by Sub-Inspector.
Mar. 12	William Darby, White-house Street.	Henry Richards and Charles Sturge, Esqs.	Neglecting to cause his child to attend school -	- -	0 6 6	Withdrawn on payment of costs.
„ 19	William Lowe, Great Hampton Row.	„ „	Employing a child without a surgical certificate -	2 0 0	0 12 6	
April 16	George Haynes, Cleveland Street.	„ „	Employing a young person without a surgical certificate.	3 0 0	0 12 6	
„	„ „	„ „	Employing a child without a surgical certificate -	3 0 0	0 13 6	
„	„ „	„ „	Employing a young person after 6 p.m. - -	- -	0 10 0	Dismissed. Witnesses contradicting their former statement.
„	„ „	„ „	Employing a child after 6 p.m. - - -	- -	0 10 0	
„	Mary Ann Ashford, Lower Tower Street.	„ „	Employing a child without registering her name	- -	0 9 0	Withdrawn on payment of costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
			PROSECUTIONS UNDER THE WORK-SHOP REGULATION ACTS, 1867 and 1871.			
1874.			*Informations laid by Capt. May, R.N.*	£ s. d.	£ s. d.	
Nov. 5	H. Moss, Chesterton	H. C. Greenwood, Esq., Stipendiary, Tunstall.	Employing a female, under 16 years of age, in a brickyard.	2 0 0	2 11 0	
"	" "	" "	Employing a female, under 16 years of age, in a brickyard.	2 0 0		
"	" "	" "	Employing a female, under 16 years of age, in a brickyard.	2 0 0		
1875. Mar. 25	Amies and Tyler, Stafford	John Shallcross and Thos. Turner, Esqs., Stafford.	Employing a child for more than 6½ hours in one day.	0 5 0	0 6 0	
"	Wm. Anderson, Stafford	" "	Permitting his child to be employed for more than 6½ hours in one day.	0 2 6	0 6 0	
			Informations laid by Mr. Beadon.			
1874. Dec. 1	Jos. Davis, Bridport	Ch. Tucker, Esq. (Mayor), Stephen W. Whetham, and Fred. Good, Esqs., Bridport.	Allowing his child to be employed in a workshop without attending school.	- -	0 6 0	No penalty.
"	Grace Gale, twine spinner	" "	Employing a female child without school certificate.	- -	0 10 7	No penalty.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Beadon*—cont.	£ s. d.	£ s. d.	
Dec. 1	Grace Gale, twine spinner	Ch. Tucker, Esq. (Mayor), Stephen W. Whetham, and Fred. Good, Esqs., Bridport.	Employing a female child without school certificate.	- -	0 7 6	No penalty.
„ 5	Walter Jerrard and Elizabeth Jerrard, dressmakers.	B. H. Walsford, Esq. (Mayor), J. Drew, J. Millidge, B. Hopkins, and J. Abbott, Esqs., Weymouth.	Employing two women after 4 on Saturday - - -	0 0 0½	1 11 0	Costs paid by the Crown. The justices considering that as the women stated that they work willingly the law had not been seriously infringed. The Mayor giving it as his opinion (Mr. Drew joining,) that if the persons worked without compulsion the law was not broken at all. The Defendants had been repeatedly warned and pardoned.
1875. April 17	Sara J. Baker, Southampton.	A. Pegler and G. H. Perkins, Esqs.	Allowing her child to be employed in a ropework without attending school.	- -	0 13 6	Bench equally decided and no decision therefore was given.
"	„ „	„ - „	Allowing same to work over 6½ hours in one day -			Second case not gone into, as depended also on child's age,—which parent disputed in the face of the registrar's certificate of birth. Costs paid by the Crown.
„ 25	„ „	J. H. Cooksey, A. Pegler, G. P. Perkins, and G. T. Tucker, Esqs.	Adjourned hearing of same - - -			

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Beadon*—cont.	£ s. d.	£ s. d.	
April 29	Sara J. Baker, Southampton.	J. H. Cooksey, A. Hearne, A. Pegler, and A. Lamb, Esqs.	Allowing her child to be employed in a workshop without attending school.	0 10 0	1 6 6	Reserved proceedings on same offence, when a conviction was obtained. Paid by Defendant.
					3 5 0	Paid by the Crown.
			Informations laid by Mr. Godfrey-Faussett.			
Feb. 19	A. E. Greening, milliner, Alfred Place, Bristol.	Wm. Hathway and C. Goodwin, Esqs.	Employing six females after 4 o'clock p.m. on Saturday 6th February.	1 0 0	1 10 6	Five cases withdrawn on payment of costs by Defendant.
April 29	Alfred Page, brick manufacturer, Swindon, Wilts.	David Archer, Esq., Major Prower, and H. N. Goddard, Esq.	Employing two children for more than 6½ hours on one day.	0 2 0	1 5 0	
"	" "	" "	Employing a child for more than 6½ hours on one day.	- -	0 10 0	
"	" "	" "	Employing a child after 2 o'clock in the afternoon of Saturday.	- -	0 6 6	
"	" "	" "	Not producing certificate of school attendance of a child.	- -	0 6 6	Withdrawn on payment of costs by Defendants.
"	Edward Nash (parent of child employed in brickyard).	" "	Allowing his child to be employed for more than 6½ hours on one day.	- -	0 4 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Godfrey-Faussett*-cont.	£ s. d.	£ s. d.	
April 29	John Drewitt (parent of child employed in brick-yard).	David Archer, Esq., Major Prower, and H. N. Goddard, Esq.	Not causing his child to attend school - -	- - -	0 4 6	Withdrawn on payment of costs by Defendant.
1874.			*Informations laid by Mr. Johnston.*			
Dec. 11	John Kelly, 134, Great Sherlock Street.	J. D. Goodman and Chas. Ratcliff, Esqs., Birmingham.	Suffering his child to be employed for more than 6½ hours on December 4th.	0 2 6	0 12 6	
„	James Lewis, 29, Dymoke Street.	„ „	Similar offence on November 26th - -	- - -	- -	No appearance, warrant granted.
„ 14	„ „	Alderman Manton and Chas. Sturge, Esq.	- - - - - -	0 1 0	1 0 0	
1875. April 16	Hyman Peters, tailor, Ellis Street.	Charles Sturge and Henry Richards, Esqs.	Employing a male young person after 9 at night on 8th April.	1 0 0	0 12 6	
„	„ „	„ „	Employing a woman after 9 at night on 9th April	1 0 0	0 12 6	
„	Samuel Greenberg, tailor, Wrentham Street.	„ „	Employing a woman after 9 at night on 6th April	1 0 0	0 12 6	
„	David Greenberg - -	„ „	Obstructing the Sub-Inspector in his inspection of the workshop of Samuel Greenberg on 10th April.	1 0 0	0 12 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Mostyn.*	£ s. d.	£ s. d.	
Nov. 25	Evan Thomas, Cardiff -	R. O. Jones, Esq. (Stipendiary), and J. Ride, Esq., Cardiff.	Employing two females in a handicraft after 9 p.m.	6 0 0	4 6 6	Total costs.
"	" "	" "	Employing 15 females in a handicraft after 9 p.m.	- - -	- - -	These cases withdrawn, at Magistrates suggestion, on payment of costs.
1875.			*Information laid by Mr. Striedinger.*			
Jan. 21	Henry Puxton, tailor, Witney.	Rev. F. M. Cunningham and Rev. R. L. Baker, County Petty Sessions, Witney.	Employing a young person on Saturday after 4 o'clock in the afternoon; viz., till 8 p.m.	1 0 0	0 17 6	
1874.			*Informations laid by Mr. Bowling.*			
Dec. 18	John Farmer, jun., Brearley Street West, Birmingham.	J. D. Goodman and G. Goodrick, Esqs., Birmingham.	Forging a certificate of his attendance at school -	- -	0 6 6	Withdrawn on payment of costs.
1875.						
Jan. 15	Joseph Machin, Birmingham.	" "	Not causing his child to attend school - -	0 1 0	1 12 6	
" 29	M. McDonnel, Birmingham.	" "	Not causing his child to attend school - -	0 5 0	0 12 6	Without costs.
"	James Finn, Birmingham	" "	Consenting to his child being employed for more than 6½ hours.	0 5 0	0 12 6	Without costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Bowling*—cont.	£ s. d.	£ s. d.	
April 9	Wm. Smith, Main Street, Sparkbrook.	C. Sturge and H. Richards, Esqs.	Not causing his child to attend school - -	0 5 0	0 12 6	Without costs.
„ 16	Lawley and Co., Tenby Street, Birmingham.	„ „	Employing a male young person after nine at night.	1 0 0	0 12 6	
„	„ „	„ „	Same offence in a second case - - - -	1 0 0	0 12 6	I found these young persons at work at 9.22 p.m.
„	„ „	„ „	Employing a female young person after nine at night.	1 0 0	0 12 6	
„	A. Wigley, Caroline Street	„ „	Employing a male young person after nine at night.	1 0 0	0 12 6	I found this young person at work at 9.35 p.m.
„	J. Mitchell, Caroline Street.	„ „	Employing a male young person after nine at night.	1 0 0	0 12 6	I found this young person at work at 9.55 p.m.
„	H. Roberts, Lynch Street	„ „	Not causing his child to attend school - -	0 5 0	0 12 6	Without costs.
„	George Bayliss, Edward Street.	„ „	Consenting to his son being employed after nine at night.	- -	0 6 6	
„	George Gwyther, Harford Street.	„ „	Consenting to his daughter being employed after nine at night.	- -	0 6 6	I was unable to prove the consent of the parents, and withdrew these charges.
„	James Dale - - -	„ „	Consenting to his son being employed after nine at night.	- -	0 6 6	
„	Edward Smith, Constitution Hill.	„ „	Same offence - - - - - -	- -	0 6 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Meade-King.*	£ s. d.	£ s. d.	
Nov. 27	William Taylor, saw mills, Granby Row, Manchester.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child, under the age of 13 years, for more than 6½ hours in one day.	1 0 0	0 11 6	
,,	,, ,,	,, ,,	Employing the same child without having obtained a certificate of attendance at school.	1 0 0	0 8 6	
,,	James Donelly, 19, Long Street.	,, ,,	Neglecting to cause his son, a child under the age of 13 years employed in a workshop, to attend school.	0 10 0	0 8 6	
Dec. 18	Benjamin Hyam, tailor, &c., Market Street.	George Fox and Thomas Rose, Esqs., City Police Court, Manchester.	Employing a woman after 4 o'clock in the afternoon of Saturday.	1 0 0	0 11 6	
,,	,, ,,	,, ,,	Employing a woman after 4 o'clock in the afternoon of Saturday.	1 0 0	0 11 6	
1875. Jan. 20	John Galloway, lithographic printer, King Street.	Francis John Headlam, Esq., Stipendiary Magistrate, City Police Court, Manchester.	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
,,	,, ,,	,, ,,	Employing a child without having obtained a certificate of attendance at school.	1 0 0	0 11 6	
April 23	James Leverett, boot and shoe maker, 55, Dalton Street, Hulme.	,, ,,	Employing a young person during a period of 24 hours for more than 12 hours, and after the hour of nine at night.	1 0 0	0 11 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Information laid by Mr. Jones.*	£ s. d.	£ s. d.	
Mar. 1	Joseph Smart, horse nail maker, Simmon's Lane, Netherton.	Wm. Wilkinson and Saml. Rudge, Esqs.	For not causing his son to attend school - -	0 10 0	0 10 6	
1874.			*Informations laid by Mr. Richmond.*			
Nov. 4	William Smethurst, cotton dealer, 8, George's Dock, Liverpool.	T. S. Raffles, Esq., Stipendiary, Liverpool Borough Court.	Employing four women in a cotton kiln on Sunday	0 10 0	1 14 0	These women commenced work at 8 a.m. on Sunday, and worked all that day, Sunday night, and Monday.
1875. April 23	J. and S. Peck, Basnett Street, Liverpool.	T. D. Hornby and H. Maxwell, Esqs., Liverpool Borough Court.	Employing 20 women (10 informations) in dress-making at 9.45 p.m.	5 0 0	2 15 0	
1874.			*Informations laid by Mr. Hoare.*			
Nov. 11	J. Collinge and Co., packing case makers, Charlton Street, Manchester.	F. S. Headlam, Esq., Stipendiary, City Police Court, Manchester.	Failing to obtain a school certificate for a child -	1 0 0	0 11 6	
"	J. H. Higgins, brickmaker, Exchange Street, Manchester.	" "	Employing a female, under 16 years of age, brick-making.	1 0 0	0 11 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Hoare*—cont.	£ s. d.	£ s. d.	
Nov. 11	J. Hammond and Co., clothiers, Dantzic Street, Manchester.	F. S. Headlam, Esq., Stipendiary, City Police Court, Manchester.	Employing two children more than 6½ hours -	2 0 0	1 3 0	
„	Patrick Cullen, Lyons Street, Manchester.	„ „	Failing to cause his child to attend school - -	- -	0 6 0	Withdrawn. I was unable to procure proof of age though the mother admitted the child was not 12.
„	Elliot Jepson, 32, Harrison Street, Manchester.	„ „	Similar offence - - - - -	0 5 0	0 9 0	
„	Jonathan Spooner, Brown Street, Manchester.	„ „	Similar offence - - - - -	0 2 6	0 9 0	
„	James Dodd, brick moulder, Cheetwood Lane.	„ „	Consenting to the employment of his daughter, aged 14, in brickmaking.	- -	0 6 0	Withdrawn on Defendant paying the costs and promising not to allow his daughter to work at brickmaking for the future.
			Informations laid by Mr. Brewer.			
„ 6	Samuel Perrens, Shepherd's Brook, Lye.	Colonel Fletcher and B. Littlewood, Esq., Police Court, Stourbridge.	For employing child without school certificate -	0 2 6	0 14 1	Costs include 3*s.* 7*d.* allowed for birth certificate.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Nov. 6	John Richards, Green Lane, Lye.	Colonel Fletcher and B. Littlewood, Esq., Police Court, Stourbridge.	Neglecting to cause his child to attend school when employed.	0 2 6	0 11 6	Costs include 1*s.* for search for birth.
„ 11	Thomas Weaver, Spinners End, Cradley Heath.	F. W. G. Barrs and Leecroft Freer, Esqs., Police Court, Old Hill.	Employing a female after 9 p.m.	0 6 0	0 12 0	Conviction after great opposition from Mr. Barrs, who is now dead. See Report for half-year ending 31st October 1874.
1875. Feb. 8	Stephen Stephens, chainmaker, Bowling Green, Dudley Wood.	C. B. Cochrane and W. Wilkinson, Esqs., Town Hall, Dudley.	Employing a child without certificate	0 2 6	0 7 0	
„	„ „	„ „	Employing a child without certificate	0 2 6	0 7 0	
„	„ „	„ „	Employing a child without certificate	0 2 6	0 7 0	
„	Thomas Johnson, nailer, Bowling Green, Dudley Wood.	„ „	For permitting his son to work in Stephen's shop, and neglecting to cause him to attend school.	0 10 0	0 11 6	
„	Joseph Horton, labourer at ironwork, Bowling Green, Dudley Wood.	„ „	For permitting his son to work in Stephen's shop, and neglecting to cause him to attend school.	0 10 0	0 12 6	
„	Samuel Smith, gas pipe fitter, Bowling Green, Dudley Wood.	„ „	For permitting his son to work in Stephen's shop, and neglecting to cause him to attend school.	0 7 6	0 11 0	Second offence, but I had forgotten him.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Feb. 8	Samuel Smith, gas pipe fitter, Bowling Green, Dudley Wood.	C. B. Cochrane and W. Wilkinson, Esqs., Town Hall, Dudley.	For allowing his child to be employed more than 6½ hours.	0 7 6	0 7 0	I issued this second summons against him as he refused to send his child to school and took him from work. He goes now.
„ 10	Gilbert and Nephew, chainmakers, High Street, Cradley Heath.	Noah Hingley and Leecroft Freer, Esqs., Police Court, Old Hill.	Working child without certificate of school	0 2 6	0 12 0	
„	„ „	„ „	Working child without certificate of school	-	0 9 6	Withdrawn, at request of Bench, on payment of costs.
„	Joseph Brettel, chainmaker, Queen Street, Cradley Heath.	„ „	Neglecting to cause his child to attend school	-	0 8 0	A large family and poor.
„	William Dearne, puddler, Queen Street, Cradley Heath.	„ „	Neglecting to cause his child to attend school	-	0 8 0	Bench ordered the Defendant to pay 4s. on account of his poverty and want of work, which I did not believe.
„ 12	Philemon Westwood, Love Lane, Lye.	Col. Fletcher, C. Noel, Esq., and Col. Barrows, Public Office, Stourbridge.	Neglecting to cause his child to attend school	0 1 0	0 14 1	Costs include certificate.
„	Benjamin Boxley, Cradley	„ „	Neglecting to cause his child to attend school	0 2 6	0 14 1	Costs include certificate. Attempted deception as to age.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Feb. 12	Mary Anne Worton, Cradley.	Col. Fletcher, C. Noel, Esq., and Col. Barrows, Public Office, Stourbridge.	Neglecting to cause her child to attend school -	0 2 6	0 14 1	Costs include certificate. Attempted deception as to age.
"	Edward Fisher, Cross Walk, Lye.	" "	Neglecting to cause his child to attend school -	0 2 6	0 14 1	Costs include certificate.
"	Thomas Cox, chainmaker, Coley Lane, Cradley.	" "	Neglecting to cause his child to attend school -	0 2 6	0 14 1	
"	Edward Hodgetts, chainmaker, Cradley.	" "	Neglecting to cause his child to attend school -	0 2 6	0 15 1	Costs include certificate. Attempted deception as to age.
"	Thomas Richards, skinner master, Cradley.	" "	Neglecting to cause his child to attend school -	0 5 0	0 14 1	
"	" "	" "	Neglecting to cause his child to attend school -	0 5 0	0 11 6	Second summons, as I found he had left his wife and family and was living with another woman and did nothing to support his wife.
" 16	Henry Homer, spikemaker, New Street, Hales Owen.	F. L. Smith, E. Gem, and H. Howard, Esqs., Hales Owen.	Neglecting to cause his child to attend school -	- -	0 9 0	Withdrawn on payment of costs by Defendant.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Mar. 5	Noah Lloyd, brickmaker, Cradley.	Colonel Fletcher and C. B. Cochrane, Esq., Public Office, Stourbridge.	Neglecting to cause his child to attend school -	0 5 0	0 15 1	Costs include certificate. Attempted deception as to age.
"	Robert Hawkins, anchor striker, Cradley.	" "	Neglecting to cause his child to attend school -	0 5 0	0 13 6	Costs include 2*s.* for searches. On seeing the poor child the Bench ordered the occupier to be summoned.
" 8	Samuel Walfield, labourer, Windmill End.	C. B. Cochrane and E. F. Smith, Esqs., Town Hall, Dudley.	For obstruction - - - -	- -	0 6 6	Dismissed. Staffordshire case.
"	William Darby, nailer, Hadleys Fold, Darby End.	" "	Neglecting the schooling of his child employed in a gleed hearth.	0 7 6	0 12 6	Third conviction. Staffordshire case.
"	" "	Joseph Stokes, Esq. (mayor), and C. B. Cochrane, Esq., Town Hall, Dudley.	Neglecting the schooling of his child employed in a gleed hearth.	0 6 6	0 13 6	Fourth conviction. Second time for this same child.
"	Benjamin Darby, nailer, Hadleys Fold, Darby End.	" "	For working child without certificate - -	0 10 0	0 9 0	
"	Hannah Coley, chainmaker, New Village, Dudley Wood.	" "	Employing child without certificate - - -	0 5 0	0 9 6	

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Mar. 8	James Priest, chainmaker, New Village, Dudley Wood.	Joseph Stokes, Esq. (mayor), and C. B. Cochrane, Esq., Town Hall, Dudley.	Failing to send his child to school - -	0 10 0	0 12 6	
"	Joseph Plumb, coal miner, Windmill End.	" "	Employing child without certificate - -	0 5 0	0 9 0	This was his wife's fault, who is a most troublesome woman. Justices regretted they had no power to punish her.
"	John Lenton, coal miner, Windmill End.	" "	Failing to send his child to school - -	0 10 0	0 13 6	
"	Daniel Eley, nailer, Hadley's Fold, Darby End.	" "	Failing to send his child to school - -	0 10 0	0 15 0	
" 18	William Willetts, Z Street, Quarry Bank.	Isaac Spooner, Esq., Stipendiary, Brierley Hill.	Employing child more than 6½ hours on any one day.	3 0 0	0 13 1	Includes certificate. Mr. Spooner remarked, "Why, a collier won't "work more than eight "hours, and this child "is forced to work 11. "I fine you 3*l.*, and "costs; that is all I "can give you. I "would give you more "if I could."
"	Edward Norrall, coal miner, Quarry Bank.	" "	Not sending his child, who was employed in Willetts' shop, to school.	- -	- -	Absconded. Warrant issued.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Mar. 18	Albert Billingham, chain-maker, Sheffield Street, Quarry Bank.	Isaac Spooner, Esq., Stipendiary, Brierley Hill.	Employing child more than 6½ hours - -	3 0 0	0 13 1	Includes certificate. Mr. Spooner considers, "It is downright positive cruelty, as bad "cruelty as though "you had stabbed "him to the breast."
"	Mary Ann Cole, widow, Mushroom Green.	" "	Not sending her child, employed in Billingham's shop, to school.	0 5 0	0 11 0	Attempted deception as to age.
"	Charles Southall, coal miner, Maughan Street, Quarry Bank.	" "	Not sending his child, employed in Billingham's shop, to school.	5 0	0 12 0	Second offence. I prosecuted him exactly a year before to the very day. I had pity on the man then and paid the costs, as he had been ill, and only done a turn or two in three months.
"	Harry Gray, furnace labourer, Quarry Bank.	" "	Not sending his child, employed in Billingham's shop, to school.	0 5 0	0 12 0	
"	Elijah Cartwright, nailer, Z Street, Quarry Bank.	" "	Not sending his child, employed in Billingham's shop, to school.	0 5 0	0 11 0	The lad tried to pass as 13. The occupier made out that he was innocent. I found out he was not, and issued summons against him too at Old Hill.

RETURN OF PROSECUTIONS—*continued.*

Date	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
Mar. 19	William Hamblett, nailer, The Lye, Waste.	C. B. Cochrane and T. B. Cochrane, Esqs., Public Office, Stourbridge.	Having a woman at work in his shop after 9 p.m.	- -	0 5 6	I caught 19 that night, but Mr. Baker deemed an example sufficient, so I summoned two who had been complained of by Nail Forgers' Association.
„	George Gordon, nailer, The Lye, Waste.	„ „	Having a woman at work in his shop after 9 p.m.	0 1 0	0 6 6	Defendant did not appear but sent his wife, or this case would have been withdrawn on payment of costs.
„ 30	Joseph Kings, nailer, Alcester Road, Leckey End.	R. Smallwood and A. Rylands, Esqs.	Employing his child more than 6½ hours on any one day.	- -	0 11 0	Dismissed for want of evidence. I summoned on boy's statement before his mother and father's admission. The Justices in dismissing the case said it was a very proper one to be brought forward, and there was a very strong suspicion that Defendant worked his children harder than he ought to do, and that the child had been coached to give the answers he had given as to the time

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
			Informations laid by Mr. Brewer—cont.	£ s. d.	£ s. d.	he worked, and they warned Defendant that he must not continue to break the law, or he would be punished, if the case could be proven. (Shorthand notes) Bromsgrove Messenger, 3rd April 1875. It was a matter of public notoriety, the way the poor children were worked. The lad was under 10 and a most intelligent child. Before issuing summons, I placed the matter in the hands of a leading nailer for inquiries, to report of any extenuating circumstances before the Tuesday. He did not. He has since told me, from inquiries he made, the children were very hardly dealt by. The Act failed.
1875. April 5	Benjamin Willetts, labourer, Iron Work, Mushroom Green.	C. B. Cochrane and W. Wilkinson, Esqs.	Having a woman at work after 9 p.m.	- -	0 4 6	Did not press. Costs sufficient to enforce the Act in first offence.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Mr. Brewer*—cont.	£ s. d.	£ s. d.	
April 5	James Weaver, chainmaker, Mushroom.	C. B. Cochrane and W. Wilkinson, Esqs.	Having a woman at work after 9 p.m. - -	- -	0 4 6	Did not press. Costs sufficient to enforce the Act in first offence.
"	Samuel Weaver, chainmaker, Mushroom.	" "	Having a woman at work after 9 p.m. - -	- -	0 4 6	
"	John Oakley, coal miner, Cradley Heath.	" "	Neglecting to send his child to school - -	- -	0 5 0	Absconded.
"	Maria Granger (now Sykes). Reddall Hill, Old Hill.	" "	Neglecting to send her child to school - -	- -	0 9 0	The person having control of the child died. There was a delay in issuing summons, and in meantime she died.
" 14	Nathaniel Bridgwater, chainmaker, High Street, Cradley Heath.	Noah Hingley and Walter Bassano, Esqs., Police Court, Old Hill.	Employing a female and a lad, under 18 years of age, after 9 p.m.	- -	0 18 0	Costs sufficient to meet the case. Though I could have had a penalty if I pressed.
"	Stephen Willetts, High Street, Cradley Heath.	" "	For permitting his daughter to be employed in Bridgwater's shop.	- -	0 8 0	
"	Ambrose Weaver, chainmaker, Scholding Green.	" "	Failing to obtain school certificate of Job Cartwright.	0 5 0	0 12 0	The father of the boy was convicted before Mr. Spooner on 18th March. I did not intend proceeding against Weaver as I believed he had been deceived as to boy's real age. I received

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs	REMARKS.
			Informations laid by Mr. Brewer—cont.	£ s. d.	£ s. d.	
						information subsequently that Weaver's son, for whom the boy was blowing, knew he was under age and chose to run the risk.
1875. April 14	Thomas Hughes, coal miner, Waterfall Lane, Old Hill.	Noah Hingley and Walter Bassano, Esqs., Police Court, Old Hill.	Failing to obtain school certificate of Harriet Simpson.	0 5 0	0 12 0	
"	Thomas Simpson, Waterfall Lane, Old Hill.	" "	Neglecting to cause his daughter Harriet to attend school.	0 1 0	0 9 6	
" 16	John W. Hingley, master chainmaker, Lyde Field, Cradley Heath.	Colonel Fletcher, C. B. Cochrane, and T. B. Cochrane, Esqs.	Failing to obtain school certificate of Ellen (owner Bridget Scotsgrove) Hawkins.	- -	0 10 0	Robert Hawkins, father of child, was convicted on 5th March. The Bench were so struck with the diminutive size of the child, they ordered me to summon the occupier. I accordingly did so, but I was placed in an awkward position as I had little or no evidence as I could get no witnesses. Defendant was ordered to pay costs, and I was asked if I deemed it

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
			Informations laid by Mr. Brewer—cont.	£ s. d.	£ s. d.	
						sufficient. I acquiesced. Mr. Hingley himself was absent in the North. He is on the verge of turning his workshop into a factory.
1875. April 20	William Portman, nailer, Penny Pot, Catshill.	Captain Bourne and R. Smallwood, Esq.	Neglecting to cause his child to attend school -	- - -	0 19 7	Ordered to pay these costs, and heavy too for that side of the country. Pollman tried deception as to right age of his child. These costs include 2*s.* 6*d.* witness and 3*s.* 7*d.* birth certificate.
„ 27	Samuel Symonds, carpenter, New Street, Hales Owen.	E. Gem, Esq. - -	Neglecting to cause his daughter to attend school	- -	0 9 0	There was only the one I noticed. Defendant was in bad circumstances and just recovered from illness. It was represented that he would lose his situation if compelled to appear. Under the circumstances I agreed to accept costs.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1874.			*Informations laid by Mr. Maitland.*	£ s. d.	£ s. d.	
Dec. 8	De Jong and Co., milliners, &c., 103, Bold Street, Liverpool.	J. Weightman and T. Cropper, Esqs., Dale Street Police Court, Liverpool.	Employing three females after 4 p.m. on Saturday 21st November.	3 0 0	0 19 6	
"	Mrs. Ellen Oakes, milliner, &c., 1, Bold Place, Liverpool.	" "	Employing a female after 4 p.m. on Saturday the 21st November.	0 10 0	0 6 6	
1875.						
Feb. 5	James Ball, rope maker, Aughton Street, Ormskirk.	Dr. Ashton and R. M. Whitlow, Esq., Police Court, Ormskirk.	Employing two children (his sons) without having obtained certificates of school attendance.	0 10 0	1 0 0	
"	" "	" "	Neglecting to cause his two children to attend school.	0 10 0	1 0 0	
Mar. 10	Ferdinand Farrell, cotton dealer, Finney Lane, Liverpool.	T. S. Raffles, Esq., Stipendiary, Dale Steeet Police Court, Liverpool.	Employing seven women in a cotton kiln at 10.40 p.m. on 2nd February.	2 6 0	2 7 6	Penalty of 2*l.* in first case. Penalty of 1*s.* in other six (each).
April 28	Frederick Callan, cotton dealer, 37-39, Oriel Street, Liverpool.	" "	Employing 11 females in a cotton kiln at 10 p.m. on 24th March.	2 10 0	3 1 6	Penalty of 2*l.* in first case. Penalty of 1*s.* each in other 10.
"	James Gorman, cotton dealer, 27, Vernon Street, Liverpool.	" "	Obstructing a Sub-Inspector in the execution of his duties.	- -	1 9 6	Dismissed as occupancy was not proved. Costs paid by Crown.

RETURN OF PROSECUTIONS—*continued.*

Date.	Names and Addresses of Persons summoned.	Names of the Magistrates who heard the Case, and Place of Hearing.	Nature of the Offence.	Amount of Penalty.	Amount of Costs.	REMARKS.
1875.			*Informations laid by Capt. Cairns.*	£ s. d.	£ s. d.	
Mar. 12	Richard Corfield, Newton Street.	Henry Richards and Chas. Sturge, Esqs.	Employing a female for more than 12 hours in a day.	1 0 0	0 12 6	
"	" "	" "	Employing a female for more than 12 hours in a day.	1 0 0	0 12 6	
"	Isaac Jarvis, Philipp Street.	" "	Conniving at the illegal employment of his child -	0 5 0	0 10 0	
"	Francis Bright, Great Hampton Row.	" "	Employing a child for more than 6½ hours in a day.	0 10 0	0 12 6	
" 25	Samuel Darlaston, Smith Street.	Lieut.-Col. Ratcliffe and E. C. Osborne, Esq.	Employing a child for more than 6½ hours in a day.	1 0 0	0 12 6	
"	" "	" "	Employing a child for more than 6½ hours in a day.	1 0 0	0 10 0	
"	Patrick Callaghan, Livery Street.	" "	Conniving at the illegal employment of his child -	- -	0 9 0	Dismissed. Defendant having disappeared.
April 23	William Warner, Spring Hill.	Henry Richards and Chas. Sturge, Esqs.	Conniving at the illegal employment of his child -	0 5 0	0 12 6	

Appendix No. 2.

Accidents reported to Robert Baker, Esq., during the Six Months ended 30th April 1875, pursuant to the 7th section of "The Factory and Workshop Act, 1871," (which came into operation 22nd August 1871), and which provides, That the only accidents to be reported are the following; namely,

"(*a.*) Any accident which causes loss of life to any person employed in the factory; and

"(*b.*) Any accident which causes bodily injury to any person employed in the factory, and is produced by machinery or by explosion or escape of gas, or steam, or metal, and is of such a nature as to prevent the person injured by it from returning to his work in the factory within forty-eight hours after the occurrence of the accident."

Accidents.

Nature of Injury.	Adults.		Young Persons.		Children.		Total.		
	M.	F.	M.	F.	M.	F.	M.	F.	M. & F.
Causing death	62	1	19	–	2	–	83	1	84
Amputation of right hand or arm	5	2	4	1	–	1	9	4	13
Amputation of left hand or arm	6	3	4	3	–	1	10	7	17
Amputation of part of right hand	52	12	45	20	9	3	106	35	141
Amputation of part of left hand	46	6	26	14	10	2	82	22	104
Amputation of any part of leg or foot	6	–	1	–	–	–	7	–	7
Fracture of limbs or bones of trunk	40	5	24	3	3	3	67	11	78
Fracture of hand or foot	43	7	24	7	6	2	73	16	89
Injuries to head and face	69	11	31	11	9	5	109	27	136
Lacerations, contusions, and other injuries not enumerated above	413	82	294	112	79	28	786	222	1008
Total reported	742	129	472	171	118	45	1332	345	1677

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Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
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For Her Majesty's Stationery Office.

REPORTS

OF THE

INSPECTORS OF FACTORIES

TO

Her Majesty's Principal Secretary of State for the Home Department,

FOR THE

HALF-YEAR ENDING 30TH APRIL 1875.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1875.

SALMON FISHERIES (ENGLAND AND WALES).

FOURTEENTH ANNUAL REPORT

OF THE

INSPECTORS OF SALMON FISHERIES (ENGLAND AND WALES).

Presented to both Houses of Parliament by Command of Her Majesty.
(*Pursuant to 24 & 25 Vict. c. 109. s. 32.*)

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[C.—1254.] *Price* 11*d.*

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MR. BUCKLAND'S NINTH REPORT.

TO THE RIGHT HONOURABLE R. A. CROSS, M.P., SECRETARY OF STATE FOR THE HOME DEPARTMENT.

SIR,

I HAVE now the honour to lay before you my Ninth Report as one of the Inspectors of Salmon Fisheries for England and Wales.

I have endeavoured this year to report upon rivers in groups rather than individually.

The three main groups on which I treat this year are the rivers of Cumberland, Yorkshire, and Devonshire.

Before proceeding to this part of my report I will endeavour to give a general review of the condition of the fisheries during the past year, and for that purpose will analyze the various returns received from the different Boards of Conservators.

The following table will show whether, in the opinion of the Conservators, the take of salmon in the year 1874 was larger or smaller than in previous years.

ANALYSIS of Increase or Decrease in take of Salmon in 1874.

District.	In Tidal Waters.	In Fresh Waters.	Generally.
Avon and Erme	Increased slightly	—	Increased slightly
Avon and Stour	Decreased	Increased	—
Avon, Brue, and Parret	Increased	—	Increased
Axe	Increased (Peal)	—	Decreased
Camel	Increased considerably	Increased considerably	Increased considerably
Cleddy	Decreased	Decreased	Decreased
Clwyd and Elwy	Increased	Increased	Increased
Conway	Not known	Increased	About same as 1873
Coquet	—	Increased	—
Dart	Increased (Spring)	—	Stationary
Dee	Increased	Increased	Increased
Dovey	Double 1873	Increased	Increased
Eden	Increased	Increased	Increased
Exe	Increased slightly	Increased slightly	Increased slightly
Fowey	Decreased	Decreased	Decreased
Frome	—	—	Decreased
Kent	Increased greatly	Decreased	—
Lune	Decreased rather	Decreased rather	Decreased rather
Otter	No information	—	—
Ogmore	Stationary	—	Stationary
Rbble	Decreased	Decreased	Decreased
Rhymney	Decreased	Decreased	Decreased
Seiont	Increased considerably	Increased in size not numbers	Increased considerably

District.	In Tidal Waters.	In Fresh Waters.	Generally.
Severn	Increased	Increased	Increased
Stour	No information	—	—
Tamar and Plym	—	—	Decreased
Taw and Torridge	Decreased	Decreased	Decreased
Tees	Decreased	Decreased	Decreased
Teify and Ayron	Same as 1873	Same as 1873	Same as 1873
Teign	Stationary	Stationary	Stationary
Towy	Decreased slightly	Decreased slightly	Decreased slightly
Trent	Stationary	Stationary	Stationary
Tyne	Decreased	Decreased	Decreased
Usk	Decreased	Decreased	Decreased
Wye	Decreased	Decreased	Decreased
Yorkshire	—	—	Increased considerably.

From the above table results the following analysis :—

Increased generally.

Avon and Erme (slightly)
Avon, Brue, and Parret.
Camel (considerably).
Clwyd and Elwy.
Dee.
Dovey.
Eden.
Exe (slightly).
Seiont (considerably).
Severn.
Yorkshire Rivers (considerably).

Increased in tidal waters.

Axe (Peal).
Dart (Spring fish).
Kent (greatly).

Increased in fresh waters.

Avon and Stour.
Conway.
Coquet.

As regards the table of increase, it is satisfactory to find that such great and important rivers as the Dee, the Eden, the Severn, and the Yorkshire group of rivers have increased generally; while the smaller rivers, the Clwyd and Elwy, the Dovey, and the Seiont, in Wales; the Exe, and the Avon and Erme, in Devonshire; the Camel in Cornwall; and the Avon, Brue, and Parret in Somersetshire, are progressing favourably. It is satisfactory to know that, even in spite of many unfavourable circumstances there were more salmon in the Hampshire Avon last season than for many years before, and that the increase in fresh-waters has been very considerable; favourable causes have probably occurred to allow the fish to pass the nets in the "Run," these fish being subsequently taken in the Royalty, Winkton, and other

fresh-water fisheries. The trap at Warkworth on the Coquet, fished by Mr. Pape, has done well; but it must be remarked that the fish were small, averaging about three pounds. The larger ones were probably stopped in considerable numbers by the hang-net fishing outside in the estuary, where the fishermen will give no information whatever. These fish were, of course, all bull trout. There are no fresh-water fishings in the Avon, Brue, and Parret. The Axe is not frequented by salmon until after the nets are off. It is naturally a sea-trout river, and I am glad to find that the sea trout are increasing. I am not surprised that the Dart did well only up to March. The dry weather, combined with the weir at Totnes, probably both assisted in bringing about this result (see my report, page 14). As regards the increase in the Kent, see my report, page 10.

On looking at the other side of the picture, we find that fourteen districts show a general decrease:—

Decreased generally.

Axe.
Cleddy.
Fowey.
Frome.
Lune (rather).
Ribble.
Rhymney.
Tamar and Plym.
Taw and Torridge.
Tees.
Towy (slightly).
Tyne.
Usk.
Wye.

Decreased in tidal waters.

Avon and Stour.

Decreased in fresh waters.

Kent.

The most marked instance of this is the Tyne, where the fisheries have decreased from 86,792 in 1873 to 21,746 in 1874—a drop of no less than 65,046 fish. The conservators give as a reason the over-fishing by the hang nets at the mouth of the river and at sea. It is very possible that, as during the fishing season the shoals of salmon making for the river are either captured or broken up by a fleet of hang nets, and also captured behind the north and south piers, the dividend of fish taken out of the capital has been too hard for it to bear. Now, however, that a "playground" has been determined upon and sanctioned at the mouth of the river, and the passes are in fair working order (that of Warden especially, opening the whole of the South Tyne), we may hope that the Tyne has reached its minimum, and will gradually rise to its former prosperity. The Lune and Ribble give low water as

the reasons of falling off. In these cases the salmon stay out in Morecambe bay till the floods come, and if the floods do not come during the fishing season a large proportion, except those caught with the rod, escape capture altogether. The pollutions in the Ribble (see page 129) have also assisted to keep the fish back.

As regards the diminution on the Wye, the circumstances have been fully described in the report on the recent inquiry into the byelaws as issued by Mr. Walpole, Mr. Paterson, and myself.

I trust that the opinion of the conservators as to decrease in the take of the Taw and Torridge may be subject to modification. That they consider that the take of fish in this district has diminished is liable to misconstruction. Great care should be taken to see that smolts, kelts, and salmon out of season are not caught by fishermen in the estuary. If these illegal practices were stopped, the Taw and Torridge, having such great natural advantages, would probably at once begin to mend in a marked manner. When the new pass is built at Monkokehampton a large quantity of fresh spawning ground will be opened up. Ground so opened up, if properly protected, must necessarily conduce to the prosperity of the river.

As regards the Tees Mr. Walpole and myself have issued a separate report on an inquiry into the byelaws proposed by the conservators of that district. From the evidence we received it appears that the fish have generally increased since the Act of 1861, but I am not surprised that, considering the enormous abstraction of water from the river (see page 26), the hot weather, the pollutions of the lead mines above, and the town sewage below, in a dry year like the last the Tees has decreased. Should the season 1875 be a wet one a return just the reverse of that made this year will, I hope, be made in the report of 1876.

The Towy, I suppose, must be put under the head of decrease; the exact terms of the report are, "the season has been very precarious in consequence of the dry weather." It is a great satisfaction to know that Cothi weir has been entirely pulled down. This must of necessity much improve the river. A careful observation should be kept on the mines at Llanberymyr, where the catch-pits should be properly looked after.

It is not satisfactory to know that the Usk, which reported increase last year, does not do so this year. I trust the falling off is but temporary. It is, however, quite certain that the Board of Conservators will use every effort to defend the interests of their river.

CUMBERLAND AND WESTMORLAND RIVERS.

I have examined during the past year several of the Cumberland and Westmorland rivers, viz., the Eden, Derwent, Ellen, Kent, and Leven.

The Ellen.

The Ellen rises from Caldbeck Fells, and enters the sea at Maryport after a course of about 18 miles. In fact, it may almost

be said to empty itself into the Solway Firth. The river here is narrow, and there is a bad lead into it from the sea, so that the fish might possibly miss it.

The water at and about the harbour is in a very dirty state, and the sand near the pier to the south is quite black with coal refuse. I understand that for many miles the lower part of the river was made the common receptacle of refuse from the numerous coal works on its banks, and that a few years ago the whole of the fish from Dereham Bridge downwards were poisoned by an overflow of ammoniacal liquid from gas works.

I examined the brook that comes down from the Dereham colliery, and a worse pollution I never saw. A tanyard at Ellengrove is also the source of a very bad pollution in the form of waste tan: this is shovelled into the river as the easiest mode of getting rid of it. I suggested that it should be dried and used as fuel, and if this could not be done that a depression in an adjoining field should be utilised, and the waste tan deposited therein. I understand that the pollutions from the village piggeries and every possible abomination are allowed to flow into the river. Every matter of this kind should be looked to by the local medical officers of health.

At Nether hall, the lowest weir on the river, there is a legal fish trap, the property of Mr. Senhouse, and a fish pass attached. Complaint was made to me that this ladder was an unsightly object from Mr. Senhouse's drawing-room, and an urgent request was made that it should be shifted to the other side of the river. Mr. Senhouse kindly allowed his carpenter to take instructions from me where the ladder should be placed, and it is easily possible so to fix it as to give it much less incline than it has at present. The pass in fact is a large wooden box, 32 feet long, 3 feet wide, and 17 inches deep. The carpenter and myself were permitted to convert the zig-zag stream of water into pools by means of boards. I also constructed a pool at the base of the pass, where there was no pool before. A secondary dam formed between an island and the adjoining walls would be of very great assistance in helping the fish over. A diagonal board should also be placed on the north side of the weir, in the centre of which the trap is situated. I never saw a place so favourable as Nether hall for carrying out improvements and passing up fish as suggested by recent experience in pass making. The owner of the trap brought to my notice that experience had shown that the Ellen was more a sea trout than a salmon river, and he stated that the bars of his trap were so wide that he could not catch the sea trout.

I subsequently examined nearly all the weirs in the river, especially those at Birkby, Crosby, Dereham, Rosegill, and Oughterside. At all of these weirs old fashioned passes had been put up before my time; all of these are capable of improvement at small expense, and I gave designs for doing this.

I did my best to persuade local gentlemen to form the river into a District, so as to afford the river watcher, of whose conduct in carrying out his duty I highly approve, all the power

which exists at present under the Salmon Acts. I regret to say, however, that it has been determined not to take any steps at all in the formation of a District.

In May 1874 the river and its tributaries became very dry, at the same time sheep washing was going on; this did not tend to the general prosperity of this unfortunate river.

The Eden.

An important question has arisen as to the future prosperity of the estuary fishery in the Eden.

The estuary of the Eden (especially about Bowness) consists of a vast plain of sand. When the tide is up the appearance is that of an immense lake. When the tide is down the water is seen running towards the sea in various channels. The main channel is unfortunately continually shifting, thus confusing the fishery limits between England and Scotland.

Salmon making for the river come up with the tide into this peculiar estuary, and of course a considerable number of fishermen do their best to catch them. In former times the leister or spear was used for this purpose. When the leister became illegal the fishermen set to work to catch the salmon by means of what is called a haaf-net, or heave-net. The form of this net is that of a gigantic shrimp net. This net is 19 feet wide, 3 feet 8 across the mouth, and has a bag 10 feet long. Another net has of late been brought into use, which is a small edition of the larger net, and measures 6 feet wide, 3 feet 5 across, and 3 feet 5 inches is the depth of the net. This is called the Hand net. When fishing time arrives, each man working the larger *i.e.*, the haaf-net, stands in the water with the bottom of the net resting on the sand; the moment a fish touches the net the fisherman lifts it up and secures the fish. The other net, the "hand net," is used in a different way. Four difficulties were submitted to my notice. Firstly, the haaf-net men quarrel for the best places in which to use their heavy 19-feet nets. Secondly, those who have brought out smaller hand nets, when they see a salmon making towards a larger net, will "cut in" and take it. Thus those who can run fastest can catch most fish. Thirdly, the men persist in placing their nets one immediately before the other. This system is called "fore-baulking." Fourthly, people, such as independent farm servants, navvies, farmers, and others, not resident in the locality, come for three months, when the fish are abundant, to fish, both for profit and amusement. These people are called "strangers."

I will now deal with these points.

Firstly, from the evidence of Mr. Dunne, the Chief Constable, it appeared that the quarrelling for the best fishing places, the "fore-baulking," and the "cutting out" of salmon by means of the hand net, as well as the influx of strangers, had caused considerable riot, which might lead to bloodshed. It appeared that the men chose their fishing places by lot by the following custom, called "mills." A number of small hills of sand are made according to the number of fishermen who want places, and

are arranged in a circle. The last man who comes up is blindfolded, and set a short distance off, while each man chooses a hillock of sand, with one for the man blindfolded; the latter is then brought up, set in the centre of the circle of hills, the bandage taken off his eyes, and he proceeds to kick down one of the hillocks. The man who chose that hillock has choice of position in the water, and the second, third, fourth, and so on are chosen as the owners of heaps alternating next to the one kicked down. This system can be abused by an arrangement beforehand for some person to be last in coming, and to recognise some peculiarity in a certain heap, and know it to be the one he must kick down.

The general opinion of the fishermen was that a bag with metal tickets should be provided: every man to draw a ticket and take his stand according to the order he drew. No one should be allowed to alter the order in which they went into the water; this then would get rid of "fore-baulking." Besides this, it was thought desirable that a definite distance should be fixed between each net, in which fore-baulking should not be allowed. The distances proposed varied from 100 to 700 yards. This would do away with men running in and robbing the large nets, especially when the latter were worked by old and infirm men. One old man over 70 years of age complained much of the younger men running in and catching the salmon that would otherwise come into his haaf-net. The Board thought that they might make a byelaw to prevent fore-baulking under the words of par. 3, section 39 of the Salmon Fishery Act, 1873, which reads as follows: . . . . "to determine the length, size, and description "of nets, and the manner of using the same (not being fixed "engines) for taking salmon." It is, however, doubtful, whether the words "manner of using the same" could be applied to prevent fore-baulking.

In order to keep away the "strangers," it was proposed by a certain number of haaf-net men that the license should be raised to 5*l.*; others, on the contrary, wished the license to be fixed at 3*l.* The men at Drumburgh, between Bowness and Carlisle, who were represented by Mr. Charles Vynne, considered that 5*l.* was not too much for a draught net, but that 20*s.* or 30*s.* would be enough for a haaf-net. This opinion was probably on account of the destructive powers of the respective nets. The draught net is 80 or 100 yards in length, and about 7 feet in depth. It is rarely used in the estuary, but frequently in the mouth of the river. Ultimately, after many meetings and a long correspondence between the conservators and my colleague and myself, the haaf-net license only was fixed at 3*l.*

Another point was also brought before me, namely, the advisability of allowing a $1\frac{3}{4}$-inch mesh during certain months. The reason for the proposed adoption of the smaller mesh was two-fold. First, in order to catch the sea trout at the time of the year when they are in the estuary, the 2-inch net being too large to stop them; second, to give the fishermen on

the English side an equal chance with the Scotch fishermen on the northern side. On the Scotch side the fishermen are by law allowed to use a $1\frac{3}{4}$-inch mesh against the Englishman's 2-inch mesh. The former also uses take nets, poke nets, and trap nets, none of which are allowed on the English side. On this point Mr. William Pattison gave some valuable evidence, as representing the interests of the Carlisle Angling Association. The association had been tenants of several fisheries on the Eden for 16 or 18 years, and had greatly assisted in watching and improving the fisheries of the river. If this smaller mesh were allowed the upper fishings and the rods would fall off, and not sufficient stock left in the river. The association now contributes in license duty something like 170*l.*, or a quarter of the revenue of the district. After a considerable discussion, Mr. Pattison said that he would not object to the $1\frac{3}{4}$-inch net in the estuary, but did object to the reduced net in the river. After further consideration, the board agreed to make a byelaw legalizing a mesh of $1\frac{3}{4}$ inch from 13th May to 15th July. This byelaw has been confirmed.

A fisherman from Annan, on the Scotch side, appeared before me; he stated that the Scotch fishermen were willing to take out licenses on the English side, but the difficulty was to know the border boundary. He suggested that the mid-channel at low water, wherever it might happen to be, should be the boundary line for the future. He also mentioned the fact that several Whammle or "hang" net fishmermen had been taken to Dumfries and fined for fishing in private waters. On this point I referred the applicant to the Scotch Commissioners.

The old grievance of the Solway question was mooted. Pending the solution of the legal question which surrounds the difficulty I repeated what I have stated before, both privately and officially, namely, that the proprietors of the Scotch fixed engines should attend more to the breeding of fish in the Eden than to law points, and that they should assist the Eden Board of Conservators in watching the river, inasmuch as they would ultimately benefit by catching their proportion of the fish bred under the increased protection thus afforded. I sincerely trust an arrangement of this kind may be carried out in the spawning season, 1875–6.

The Kent, Bela, Winster, Leven, &c.

My object in visiting Ulverstone was to consult with Mr. Jackson, clerk to the board, as to what measures could be taken to put an end to the pollutions arising from Messrs. Harrison and Mitchell's paper mills at Penny Bridge on the Crake, near Ulverstone.

Through the kindness of the proprietors I was enabled to examine the whole process of coloured paper making, which I will not here describe; suffice it it to say, that a great quantity of pollution goes into the river; in fact, everything that can be possibly used up again in the manufacture is kept, while the

colouring matter, of all tints of the rainbow, and waste chloride of lime, are put into the river. I was glad to observe that at my last visit the workmen had begun to make four tanks for settling purposes, each 20 feet by 40 feet and 3 feet deep. At the bottom of these four catchpits was a most convenient hollow in a field; this might, at little or no expense, be utilized as a filter to catch matters deleterious to fish which had not subsided in the catchpits above mentioned.

There are two other points at this place, for the amelioration of which I gave plans and sketches. It appears that the "morts and sprods" begin to ascend about May. As the mill then takes nearly all the water of the river, the tail leat connected with the immense water wheel becomes practically the bed of the river, and they run up under the wheel in considerable numbers, thus tempting the men to poach them. There is at present no grating at the bottom of this mill leat, and I fixed upon a suitable spot where a wheel of iron or wooden bars, made to turn by the action of the stream, should be fixed, at such a distance as not to head back the water on to the wheel. This wheel should be at work from the middle of May to the autumn floods. After that time the volume of water in the main river becomes sufficiently large to entice the fish up to the weir itself.

As regards the 26th section of the Salmon Fishery Act, 1863, as amended by section 53 of the Act of 1873, which compels the miller to shut the hatches on Sundays and at nights, so as to cause the water to flow over the weir, I understand that the provision does not act well here, because if the hatches at the top of the mill leat were closed the water would go over the weir, the fish would come up to it, but not be able to ascend, as it is some 3 or 4 feet in perpendicular height; they would therefore remain there till the Monday, when, the sluices of the mill leat being again raised, they would be left high and dry. Under these circumstances the following plan was discussed. The bye-wash which takes the superfluous water from the mill leat commences a few yards above a large hatchway, which shuts the water completely off the mill. If, therefore, the hatch in front of the wheel were closed, and the hatches commanding the bye-wash were opened, the mill leat would practically become the river. In order to see how this acted, the wheel was stopped, and the doors of the bye-wash opened, forming an excellent pass for fish going up and down. The rise from the river to the top of the hatchways of the bye-wash was 6 ft. 4 in., and the length 104 feet. I proposed to divide this length out into nine pools, 12 feet wide; this would give less than a 9-inch rise for each.

I understood from Mr. Ainslie, an angler of the district, that the angling in the Leven has not been generally good in 1874, and that not more than 12 salmon had been killed, although the same number of rods as usual had been out. It is my opinion that the salmon passed the anglers and got into Coniston and Windermere during the heavy floods at the beginning of the season

In July and August the nets did very well on the sands, the number of morts and sprods having certainly much increased.

I again beg to remind the anglers living in the Cumberland and Westmorland lake districts that it is most advisable to try spinning for salmon in the same way as is done in Loch Tay. I am sure they would get good sport in these lakes. I understand that at the end of April 1874 a fresh river salmon of about 14 lbs. was hooked with a minnow and spinning tackle in Keswick lake.

Falling into the sea between Ulverstone and Workington are several other small, but not unimportant, salmon producing rivers, viz., the Duddon, Esk, Mite, Irt, Calder, and Ehen. Out of these, three are connected with lakes, the Esk with Burnmor Tarn, the Irt with Washwater, and the Ehen with Annerdale water.

I propose in the present year to inspect all these rivers, and to see what can be done for their further improvement.

As regards the Kent, in my last report for 1874, at page 45, I stated that Mr. Foster Braithwaite, and the agents of Lady Howard, of Leighton Hall, and myself, had been in consultation relative to the formation of a secondary dam below the natural obstruction at Levens Hall weir, at the Foss.

This secondary weir has now been built; the water is thereby backed up against the natural obstruction, forming a large deep pool, whereby the rush of water through the natural opening is very much broken. I have no hesitation in pronouncing this a success, in fact such a success that I have heard that the trout fishers complained that their angling sport below the obstruction had been injured. The reason, of course, is that the fish have now facilities for going up which they had not before. The greatest credit is due to Mr. Braithwaite, the chairman of the board, the agents of the estate, and the builder, for having made such a good job of this pass.*

Bassinghyll, above this weir, still remains a considerable obstruction.

I described in my last report the boxes which were adapted to this weir. The difficulty for the fish is, however, to get into the boxes; and I have proposed that a baulk of wood below the weir should be heightened in such a manner as to lessen the jump from the pool below into the lowest box; this will be an inexpensive addition to the facilities already given to the fish, and I feel convinced it will be of service to them.

The weir, 5ft. 10in. high and 18ft. incline, at the works of Mr. Whitwell M.P., has been carefully examined by me, in his presence. It would be very easy to make a pass for the fish by simply filling up the underspace between the two islands already existing at the base of the weir. The pass then would be on the

* I regret to hear that this secondary weir was considerably damaged by the floods of last winter.

east side of the weir. On returning home I made a model of the pass and sent it to Mr. Whitwell.

I understand the habit of killing fish with the hand, commonly called "groping," is very prevalent in the Kent; it is a question whether it comes under the Salmon Acts.

Convictions for liming have also been obtained; in one case the poachers pleaded guilty, and were fined 3*l.* 5*s.* 0*d.* each, including costs.

As regards the interference with salmon by fishing with fixed engines, see my remarks in another page.

RIVERS OF DEVONSHIRE

The great highlands of Devonshire, Dartmoor, give origin to most of the important salmon rivers of that county. Thus towards the north flow the Taw and Torridge: towards the east the Creedy, a branch of the Exe; and to the south the Teign, the Dart, the Avon and Erme, the Plym, the Tavy, the Tamar. The fall of rain, therefore, on the range of the Dartmoor hills must considerably affect the whole group of these salmon rivers, namely, the Torridge, 65 miles; the Taw, 50 miles; the Exe, 57; the Teign, 35; the Dart, 40; the Avon and Erme, 38¼; the Plym, 15; the Tavy, 23; the Tamar, 55¾; the Creedy, 16; the Yeo, 13; giving thus a total of 408 miles of salmon rivers. To this group may be added the Exe, rising in Exmoor, 60 miles long, making a total of 468 miles. During the past year I have examined five of these rivers, viz., the Taw, the Torridge, the Exe, the Dart, and the Teign.

The Dart.

At my visit to inspect the Dart, I understood from Mr. Pike, secretary to the Board of Conservators, that on the whole the Dart is doing well.

At the end of July or beginning of August 1872, 110 fish were landed at one haul from the pool immediately below the weir at Totnes. Mr. Garland has caught at this place from 50 to 100 fish in one morning, and more than 50 fish have been caught there many times.

The fish also have increased much in size. It is rare now to see fish under 10 lbs. They mostly run from 12 to 16 lbs.; many reach up to 25 lbs.; the average is about 14 or 15 lbs. These large catches, however, were always on the Monday mornings on the first tide after the weekly close season.

The fish ascended the river as far as the weir pool, and could get no higher.

The large numbers caught proved satisfactorily the benefit of the protection afforded by the Salmon Acts, but it is not a desirable state of things that the great bulk of the fish should be taken from their place of refuge, while waiting for a flood to take

them up stream. The Act of 1873 extending their place of refuge to 100 yards below the weir has proved a great benefit to this river.

The great obstacle to the ascent of the fish up the Dart is Totnes weir. There existed a legal right to put a trap connected with this weir, provided a pass was affixed, approved by the Secretary of State. A plan of a pass was sent to this office, but we could by no means recommend its approval, (1) because the proposed position for the pass was not the best; (2) the pools were much too narrow, and not flat at the bottom; (3) the rise from pool to pool was too great; (4) the inlet at the top was not sufficiently large.

The Charity Trustees, who had formerly the management of the property connected with this river, have now gone out of office by Order in Council, and it is transferred to a new Board appointed under the provisions of the Education Act for Middle-class Schools. The right to fish with a trap in this weir has, however, now ceased, consequent on the failure to erect a pass by the 1st January 1875.

The land at this place belongs to the Duke of Cleveland, who also is the owner of the fishery.

I have learned that prior to the Act of 1873, which extended the prohibition of net fishing to 100 yards below a weir in places where no fish pass existed, this fishery was let for a yearly rental of 160*l.*, and that now it is not worth one third of that amount. If this is correct, the difference of rental for two or three years would amply suffice to defray all the costs of a fish pass, and in that case I am convinced that the fishery would be immediately restored to its original value, and increased by the cessation of the right to fix a fishing trap in the weir; and, within a few years, when greater facilities were given to the fish to ascend the river to their spawning grounds, it is not too much to anticipate that the yearly rental would be increased tenfold.

Very few fish this season have got over the weir to spawn, but fry may be seen in every pool of the river.

It is to be hoped that the Duke of Cleveland will see that his property may be greatly benefited by making Totness weir passable.

I have most carefully examined the weir at Totnes. It measures from 78 to 90 feet in the slope, and 200 feet from side to side. I have come to the conclusion that it will hardly be possible to affix actually upon it any pass that would prove satisfactory in its operation. The only way to pass fish up is to take them round on one or other side of the weir, and of the two sides the ground on the north side is by far the most favourable. A cut would have to be made about the distance of 54 yards, so as to let the water from the pool above the weir into the pool immediately below the weir. Of this distance about two thirds requires but little digging, as the ground is already depressed almost to the level of the water below the river. Through the intervening ground a tunnel, or, better still, a passage some four or six feet

wide, could be readily (and I should imagine inexpensively) cut. The whole pass should, of course, be protected by an enclosure. Should this pass be constructed, and a regulating hatchway affixed at its upper end, any water now running useless as regards salmon over the weir might be turned into the pass. Fish then might be passed up throughout the summer months during the weekly close time in fair numbers to the anglers above, instead of having to remain in the pool below till a flood comes sufficiently high to carry them over the high and at the same time very steep weir.

I also examined the old site of the trap at the fulling mills above the bridge at the town of Totnes. A design for a pass to be fixed here, in order to give the right to fish the trap, was submitted to me, but it was so faulty in every way that I could not think of recommending its approval.

The next weir above Totnes is one a little below Staverton Bridge, and there is another at Riverford; these are both passable by fish, except during dry summer weather.

Then comes the weir at Mr. Barnes' paper mill at Kilbury. A pass made of granite has been placed upon this weir for many years, but it does not always act properly, though at a slight cost it might be much improved in the following way.

The fish at this weir assemble close under a wall on the east side, and are there liable to be poached from the road; when the water serves they run up by the side of the wall. Now, by a little judicious engineering, both the actual pass and also the "run" by the side of the wall might be very much improved. This could be done very simply by fixing to the natural rocks at the bed of the river a stout beam of wood, placing it across the current. This would have the immediate effect, even in a small fresh, of elevating the water on to the lower end of the original pass, at the same time it would deepen the pool in the corner near the wall. The new beam would form a lead for the fish to conduct them into the pool thus formed; several loose stones now in this natural pool should be removed, so as to deepen the water as much as possible.*

The water sent down the leat by this weir drives a turbine wheel. There is a guard in front of it for the obvious purpose of keeping out weeds and rubbish. The entrance to this mill-leat, which is very wide and capacious, should be very carefully guarded from the 1st April to the middle of June. The grating need not be permanent, but a piece of small-mesh rabbit netting, or a bit of garden netting, would be better than nothing. It should be placed, as I informed the Board of Conservators, at such an angle and of such sufficient length as would stop the fish from going down the leat. (See Plan No. I., p. 68.)

The next weir above this is at Buckfast. Upon this, some

* I understand from Mr. Pike that the beam in question has been on the ground for several months, waiting for the water to get low enough to fix it, which can only be done in very dry seasons.

years since a diagonal board was fixed. I am informed that it does not act properly. A good pass might be made here by cutting through the earth between the weir and the mill leat, so that the fish assembled at the base of weir would pass immediately into the mill leat. This would be a good place for a pass on this plan. (See diagram No. II., p. 70.)

Great complaints have been made during the past year of the destruction of fish in the Dart by pollutions, and I have examined three works situated upon the Dart. At Mr. Barnes' paper mill at Kilbury I found that rope, bagging, and rags, are cut up and boiled. In this process, citrate of soda and other mineral ingredients are used. The residue of this, after washing, is caught in a pit, just outside the boiling house, and Mr. Barnes assured me that it was too valuable to be wasted; but there was reason to fear, from the appearance of stains over the ground adjoining, that this pit occasionally overflowed, and the contents leaked into the mill tail, from which it was only about three yards distant, and this must cause injury to the fish.

On inspecting the interior of the mill, where the rags, &c., are pulped, I found that the liquid refuse therefrom, impregnated with chemicals, passes directly into the mill leat through a common wooden spout, and must of necessity be very injurious to the fish. Between the mill leat and the river bank is some ground upon which a few trees are growing. This might be utilised to purify the water to a considerable extent by means of catch pits. The result of my interview with Mr. Barnes, owner of the works, was that he promised to take the dirty water across the mill leat by a wooden pipe, and to cut two ditches each 18 inches or 2 feet deep in a V shape, with a communication from one to the other. He would do this as an experiment, and if it was found to answer he would extend the plan so that no dirty water should go direct to the river. As regards the performance of this promise, Mr. Pike informs me it has been carried out to a modified extent. Mr. Barnes now carries this refuse across the leat, and has made gutters in the ground opposite, but he declines to make them anything like the depth stated, on the ground that any opening of the bank there would so weaken it that in a time of flood it would endanger the whole of it being washed away. The liquid refuse, however, now runs over the land before finding its way to the river.

The bottom of this mill leat requires a guard to prevent the fish going into it, and a revolving wheel would be the most efficacious. This has, I am informed, been ordered by the Board of Conservators, and it will be put in place when the waters are lower in the summer.

The river Merdle passes through Buckfastleigh, and empties itself into the Dart. In its course it passes through the works of Messrs. Hamlyn, Brothers, of Buckfastleigh. These are large woollen manufactories, for working which the waters of the river are extensively used.

In the process of washing the wool a considerable quantity of yolk or greasy matter is extracted. Formerly this was allowed to run over meadows in the neighbourhood, and it greatly improved the pasture, but a process is now adopted to recover this yolk or grease by using muriatic acid, which precipitates it to the bottom of catch-pits, when the liquid portion containing all the acid flows into the river Merdle again.

At this place many dead fish were found during last summer, some of which were sent to me, with samples of the water taken from where the fish were picked up, and on testing the water I found it was without doubt most deadly to fish.

On the occasion of my visit I found, on testing the water with litmus paper some distance below the exit of the pipe from the catch pit, that a great deal of acid was allowed to run into the river, and I pointed out a locality where the acid water from the pits should be run into deep holes in the ground, and not allowed to go into the river at all. The Messrs. Hamlyn promised to have this done, and since my visit I am informed that the suggestion has been carried out, but the liquid still finds its way into the river, and with it there is the fear that the acid is still present. When the river is full, it cannot be seen whether it kills the fish. The evil is a serious one, as, although in one factory it may not be sufficient to destroy fish life in consequence of a large propor- of pure water, yet with other factories added the evil result is certain.

At the tan works close by, the chloride of lime is said to be kept out of the river, but it is to my mind in dangerous proximity to it.

At Mr. Churchward's mill the wool is simply washed, and the residue is used as a manure for grass lands with great success.

At the woollen factory of Messrs. John Berry and Sons, muriatic acid is used in the same way as at Messrs. Hamlyn's, and in addition thereto they steam the grease deposited in the catch pits, and the refuse water is sent into the river. One catch pit was nearly completed, and another was to be made when I visited these works, and Dr. Gale, who is the owner of the property, has promised me that for the future the Dart shall be kept as free as possible from pollutions arising from this factory.

The Teign.

I have at the request of the Conservators examined this river, having been especially requested to give a design for a pass at Bellamarsh weir. This is at first sight a very formidable obstruction; it is a sloping weir, with a sill at the top of it. The stone-work of the weir is new. I ascertained that the weir becoming decayed some two years ago, the stones sunk so much that it was necessary to put a board on to the sill, in order to raise it to its original height. The pool where the fish assemble is on the south side; the mill leat intervenes between it and the road.

The whole of the weir is constructed with very rough stones,

with intervening spaces between them, and there are some very large stones doing no good in the pool below the weir. It would not be difficult with a little contrivance to make this weir passable for fish. It is requisite to staunch the holes between the stones with cement, and to arrange the big stones at the bottom of the weir in such a manner as to form a pool, as well as to raise the water at this particular spot on to the face of the weir. The board forming the sill of the weir should then be made capable of being removed when there is more water coming down the river than is required for the use of the mill wheel. If this were done the fish might easily be passed up. I have consulted with the agent of the owner, who informs me that he has no objection to the removal of the proposed portion of the sill of the weir during floods and in the winter time, so long as no injury is done to the milling power. He also does not object to the plan of altering the stones at the foot of the weir into the form of the pool, as long as the security of the weir is insured, and no expense is incurred by the proprietor. He wishes the work to be done to the satisfaction of John Lang, of Kingston.

A grating is much required at the entrance to the leat at this weir.

I observed that the water below this weir at the time of my visit was of a bluish colour, somewhat similar to the bottles in the chemists' windows, and was informed that further up the river were copper mines. In one case a spring runs through a copper mine, and it has been proposed that the water arising from this spring shall be conducted in its passage through the mine in a pipe, so that the water, naturally pure in itself, shall reach the river in an unpolluted state. I trust this plan may be carried out, but there will then be other streams from mines to be attended to.

Exe.

In my last year's report I gave a full account of the Exe. I am sorry to say that very little, if anything, has been done to the weirs on this river, viz., Salmonpool weir, Trews weir, Blackaller weir, and Cowley Bridge weir. In my inspection in May the river was in a most terrible state of pollution of every sort and kind, and the visitor would hardly suppose that the Exe could ever carry salmon.

By tracing out the tributaries and catchment basins of the Exe, it will be seen, however, that this river is in reality, by nature, an important salmon-producing river. It is about 60 miles long, and rises from Exmoor, close to the Bristol channel.

In the upper country, especially in the Barle, its spawning beds are very good. It is stated that when Mr. Brunel built his first railway bridge over the Exe he treated the river with considerable contempt, the consequence being that when the river came down in flood his bridge was swept away.

The catchment basin of the Exe is 502 square miles, and the tributaries Creedy, Yeo, Culme, and the streams above Tiverton, send down a very large volume of water in the winter time; the

pollutions being washed out and the weirs being made more or less passable, salmon are able to ascend to the spawning grounds.

Since nature, therefore, has done so much for this river, it is a matter of regret that the inhabitants of Exeter and its neighbourhood do not pay the consideration to the river its capabilities deserve.

The first thing to do is to keep out pollutions, the second to rectify the passes on the weirs; the third to see that the mill hatches are put down on Sundays and at nights, so as to cause the water to flow over the weirs. If this were done no expense whatever would be incurred. For instance, if the hatch at the enormous mill leat connected with Salmonpool weir were put down on Sundays and at night, and the tide happened at the same time to be backed up against the lower face of the weir, this weir would become of much less hindrance to the fish than heretofore. What applies to Salmonpool weir applies to all the others. I therefore strongly advise the Board of Conservators to issue printed notices to the millers and see that the law is carried out which enforces the closing of hatches at mill leats on Sundays and at all times when the water is not required for milling purposes.

Mr. Frank Gosden, fishmonger, of High Street, Exeter, who takes the greatest practical interest in the produce of the river, reports to me, from his own business experience, that the season of 1874 has been the best season since he came to Exeter. In 1870 the take was moderately good; in 1871 exceedingly good; in 1872 take diminished somewhat; in 1873 there was a slight increase over the previous year. The number of salmon which came to his share for 1874 was 290; this, of course, includes sea trout.

It is certain that the Exe is naturally a late river, and the fishermen last year petitioned for the extension of the open time. For my part, I think it would be perfectly justifiable to assimilate the fishing season to that settled for the neighbouring river, the Axe, namely, from May 1 to September 19.

The Exe has been under more or less under cultivation since I gave my lecture at Exeter in 1868, and I again venture to appeal to the inhabitants of this ancient city to rouse themselves from their apathy as to the condition of their river and do their utmost to develop their naturally most fertile water farm now so unwisely neglected.

For my report on the Taw and Torridge, see p. 49.

YORKSHIRE GROUP OF RIVERS.

Whereas during the past season the cultivation of the group of Yorkshire salmon rivers has given rise to much public interest, and the question will certainly be again discussed, and I trust action taken in the matter, during the summer of 1875, I give a general abstract of the physical and geological conditions of this

group of valuable rivers, from the work of my late valued friend, Professor John Phillips, M.A., F.R.S.:—"The Rivers, Mountains, and Sea Coast of Yorkshire." (Murray, Albemarle Street, 1855.) The Professor writes:—"The Humber admits a vast body of sea-water to meet the abundant contributions of the rivers Dun, Calder, Aire, Wharfe, Ure, Swale, Derwent, and Hull. Tees and Esk have their own out-falls to the sea. * * * It may be convenient to arrange in a small compass some of the characteristic differences of the several districts:—

"North-western District.

"Greatest elevation	2,580 feet in Mickle Fell.
Principal rivers which rise in the district	Tees, Swale, Ure, Nid, Wharfe, Aire, Ribble, Hodder, Eden.
Average depth of rain in a year at Settle	43 inches.
Geological constitution	Millstone grit, Yoredale rocks, Scar limestone, slate rocks, and greenstone.

"South-western District.

"Greatest elevation	1,859 feet in Holme Moss.
Principal rivers which rise in the district	Calder, Dun, Dearne.
Average depth of rain in a year at Halifax	33 inches.
Geological constitution	Coal formation, millstone grit, Yoredale rocks.

"North-eastern District.

"Greatest elevation	1,485 feet in Burton Head.
Principal rivers which rise in the district	Esk, Wisk, Derwent.
Average depth of rain in a year at Brandsby	28½ inches.
Geological constitution	Oolitic and Lias formations.

"South-eastern District.

"Greatest elevation	805 feet in Wilton Beacon.
Principal rivers	Branches of Derwent and Hull.
Average depth of rain in a year at Huggate	30 inches.
Geological constitution	Chalk, with a red base, resting on Speeton clay, and various members of the Oolitic and Lias series.

"Ribblesdale District.

"Greatest elevation	Generally below 600 feet: Ryeloaf, on the northern border (a detached hill of the north-western district) is 1,796 feet high.
Principal rivers	Branches of Ribble and Lancashire Calder.
Average depth of rain in a year at Bolton, by Bollands	47 inches.

" Geological constitution - { Yoredale rocks, with scar limestone rising through them, and detached caps of millstone grit on the borders.

" MICKLE FELL GROUP.—Mickle Fell (Teut. Great Mountain) in the extreme north-western angle of Yorkshire, is the highest of some thirty summits which rise more than 2,000 feet above the sea, and are scattered along the Penine chain between Teesdale and the region of Ribblesdale or Low Craven. * * *

" Mickle Fell, situate between Teesdale and Lunedale, rises above the point where these valleys meet about 2,000 feet, above the sea 2,580 feet. * * * * * *

" Looking from Mickle Fell over Stainmoor, along the summit of drainage, or 'heaven-water boundary,' as it is called, we behold a large group of fells about the sources of the Eden, Lune, Swale, Ure, Nid, Wharfe, Aire, and Ribble. * * *

" The area of Yorkshire is reckoned by Mr. Rickman, in the population returns of 1831, at 5,836 square miles. Of this the larger portion, viz., about 80 parts in 100, delivers its springs and surface water by innumerable feeders to the Humber and German Ocean; somewhat less than 13 parts in the 100 into the same sea, but not through the Humber; and rather more than 7 parts in the 100 flow to the Irish Channel. * * * *

" Drainage of the Humber, estimated in square miles, each including 640 acres:—Swale, 543; Ure, above York, 725; addition to Ure below York, but above Derwent, 175; Wharfe, 359; Derwent, 871; Aire and Calder together, 683; Dun, with feeders on the south and west, 691; additions to Ouse and Humber below Derwent, 170; Hull, 286; streams falling into Humber below Hull, 170:—total, 4,673 square miles.

" Drainage to the East Sea, but not through the Humber:—Tees, 347; streams on east coast from Teesmouth to Filey, 131; Esk, 162; streams on Holderness coast, 100:—total, 740 square miles.

" Drainage to Irish Channel:—Lune, 169; Ribble, 221; Saddleworth, 33:—total, 423 square miles.

" In this enumeration the river which drains the largest surface is the Derwent, but the quantity of water which it discharges in ordinary states of the weather is comparatively small, because the average fall of rain in the country which it traverses does not, I believe, exceed 24 inches in a year. A far greater body of water comes down the Tees, Swale, Ure, Wharfe, Aire, Calder, or Dun, though they drain smaller areas, because the annual fall of rain in the districts through which they flow is double that which feeds the Derwent. The average annual fall on the whole area of Yorkshire may be estimated at about 30 inches; on the east coast under 20, and on the extreme west under 50. * * *

" I am not aware of any published experiments to show how much water is discharged in a year by the rivers, or indeed by any one river. As some approximation to these results, I have gauged, with the assistance of Mr. William Hill, the river which

washes the walls of York, and obtained for a period of seven months, commencing 1st November 1851, the quantity of water in cubic feet per day. I conclude from these observations that the river, when it is entirely free from freshes, and supplied only by springs and drains, delivers about 15,000 cubic feet per minute. The drainage of the York river amounts to about 1,268 square miles, and therefore the annual supply of spring water is equal to a depth of 2·66 inches on the whole surface, besides the amount evaporated from the streams."

The Ure.

In October last I attended a very influential and important meeting held by gentlemen interested in the cultivation of the Yorkshire salmon rivers, especially the river Ure. The Ure is 61 miles in length, and with its tributaries drains 2,400 square miles. The upper waters are free from pollutions, and contain excellent spawning grounds. Professor Phillips says of it, "The Ure, "like other northern streams, especially near their source, varies "greatly in respect of the quantity of water which it discharges. "In floods it is a great, a mighty river, bursting with prodigious "effect through magnificent rocks; but in droughts only a few "gentle rills, the tears of the Naiads, run over the ledges of lime-"stone." The meeting at Ripon was presided over by the Marquis of Ripon, and a large number of local gentlemen attended, in order to take into consideration what could be done for the future in cultivating this river. The whole system of Yorkshire rivers entering the Humber are blocked low down by two weirs; first of all that at Naburn below York. Sometimes, unfortunately not sufficiently often, as I explained in a former Report, the tideway ascends to such a height that it happens that Naburn becomes practically no obstruction at all. If, however, the plan proposed by Mr. Phillips, and quite approved of by my colleague and myself, were adopted, this weir would be passable for fish on many more occasions than at present. There are some moveable boards upon the top of the weir, and if one or two of these boards were taken off as occasion served, the fish would be able to ascend easily. The board could be so arranged to be taken off that the navigation would not in the least way be impaired, and I sincerely trust that the authorities who have charge of Naburn Lock will assist the Board of Conservators in this affair; very simple in itself, but very important to the riparian inhabitants of the whole vast group of Yorkshire rivers.

Linton weir is the second very formidable obstruction, but here the fish have not the advantage of a rising tide to help them over. The ladder which was formerly placed here was wrong in principle, and the steps of it have now been entirely removed, and it is now practically useless.

At the meeting I explained, by means of a model, that it would be useless to lay out any money upon building a pass in any way

attached to Linton dam, and that the proper way was to make a cut round the south side, this cut to consist of pools having an easy jump from one to the other, and with all other practical details perfectly carried out. The model I would take for this is Mr. Jebb's pass at Penarth, a plan of which can be seen in the diagram at page 76.

Upon the Wharfe three passes are now in existence, namely, at Tadcaster, Harewood, and Wetherby. The pass at Tadcaster was undertaken for the most part by Lord Londesborough, the Board of Conservators contributing only 80*l.* The corporation of Leeds had erected a fish pass at Wetherby, at the cost of 600*l.* The Ure, therefore, requires opening up and proper cultivation. The weirs on the Ure that require to be made passable are at Boroughbridge, Westwick, and Mickley.

The principal object of the meeting at Ripon was to provide passes over these three weirs, so as to let as many fish as possible come up for the benefit of anglers, as well as to increase the general supply of fish caught in the district. At the meeting I stated that the Yorkshire district had very much improved since the passing of the Act of 1861. The late Mr. Thomas Ashworth, in his evidence, given at York, in 1860, stated that there appeared to be about 15 places on the Ouse, between York and the Humber, where salmon were caught, and the rent of those fishings amounted to 122*l.* 15*s.* In the official report of the Inspectors for 1873 (13 years after Mr. Ashworth's statement), there were caught in the district, with nets, 1,823 salmon, weighing over 19,000lbs.; estimating the value of these fish at 1*s.* per lb., it amounted in round numbers to over 1,000*l.*, as against 122*l.* 15*s.* in 1860. I hear also, on the authority of Mr. Beswick, the active and intelligent water bailiff, that "Lord "Londesborough's fishery at Selby has been most prolific during "the past season. One boat caught 60 fish in one day, and "repeatedly very large draughts were obtained, many of the fish "being 30 lbs. each. The fishery in the lower Ouse has done "better than for the last 40 years."

If, therefore, the Ure could be opened up, without doubt the general fisheries would greatly increase; the weirs being made passable, the spawning fish could be easily watched and protected by the gamekeepers of the riparian proprietors, to whom, I understand, on the application of their employers, the Board would be glad to give certificates as water bailiffs, whereby they would be able to enforce the numerous protective clauses of the Salmon Acts.

At the Ripon meeting I exhibited a series of models of inexpensive passes, one or other of which might be adapted to Boroughbridge, Westwick, and Mickley. There can be no doubt that if Linton and Naburn were made passable, that funds would be speedily forthcoming to put passes on the above-named weirs; and general encouragement would be given by the riparian owners

in the district of the Ure to do all they could to develop the natural resources of what, if cultivated, would be a most important productive water farm. The following resolutions were adopted at the meeting :—

1st. That this meeting undertakes to use its best endeavours to put efficient fish passes at Boroughbridge, Westwick, and Mickley, if the Board of Conservators agree to make a pass round the south side of Linton weir of such form and dimensions as shall meet the approval of the Home Office and the Inspectors of Fisheries.

2nd. That in order to raise requisite funds to cover the estimated cost of these fish passes, and as the revenue of the Board of Conservators is entirely expended in watching and protecting the fisheries throughout the district, this meeting is of opinion that a vigorous canvass for subscriptions should be made among those more particularly interested in the fisheries of the river Ure; and that Arthur J. H. Wood, Esq., of the Old Bank, Ripon, be requested to accept the office of honorary secretary and treasurer.

3rd. That a committee consisting of the following noblemen and gentlemen, the Marquis of Ripon, the Marquis of Ailesbury, Earl de Grey, Mr. Lane, Mr. Hutton, Mr. Clarke, Mr. Dalton, Mr. Andrew Lawson, Mr. C. C. Oxley, Mr. W. E. M. Winn, with power to add to their number, be appointed for carrying these resolutions into effect with as little delay as possible, in order that as soon as adequate funds can be raised these fish passes may be taken in hand and erected, if possible, next summer in time for the subsequent spawning season.

4th. That the best thanks of this meeting be given to the Most Hon. the Marquis of Ripon, for his able conduct in the chair.

Mr. Arthur J. Wood, of the Old Bank, Ripon, accepted the office of hon. secretary and treasurer. I understand that a considerable sum was collected in the meeting room, though it was insufficient to do all that is requisite. Doubtless when the great objects which the committee had before them are more widely known to the Yorkshire public, most of the inhabitants of the county, especially of the large towns in Yorkshire, will come forward with a liberal hand to assist in the opening up of the Ure.

It is proposed that in the course of the ensuing summer my colleague and myself shall meet the committee of the Ripon meeting and the Board of Conservators, and decide upon the best forms of passes for the weirs in the district which impede the upward progress of salmon.

THE TEES.

The joint report of my colleague and myself giving the result of our inquiry into the byelaw proposed by the Tees Board has already been issued. As, however, a great deal of valuable evidence was given at the inquiry, I take this opportunity of making some comments upon it. Flowing into the North Sea, between lat. 53° and lat. 56° N., are several important salmon rivers. Commencing from the south, we find flowing into the estuary of the Humber the following rivers: Trent, Ouse, Swale, Ure, Nidd, Wharfe, and Derwent. Then come the Tees, the Tyne,

the Coquet, and the Tweed. The following table will show the size of these four rivers :—

——	Area of catchment basin.	Length.
Tweed - - -	1,870 square miles.	100 miles.
Tyne - - -	1,053 „	73 „
Tees - - -	744 „	95 „
Coquet - - -	213 „	45 „

This group of rivers may be put under the term of the north-eastern group, and it may be well to consider them as a whole. The first feature to be remarked is that the Tweed, Tyne, Coquet, empty themselves direct into the sea, having little or no estuary, whereas the Tees has an estuary in shape somewhat like the section of tea cup ; its northern boundary being Seaton Snoop, and the southern boundary Coatham. The Yorkshire rivers empty themselves into the large trumpet-shaped estuary of the Humber ; a somewhat similarly shaped estuary is to be found also in the Solway. The period at which these rivers deserve especial attention is the time when the salmon enter them. In questions of this kind it is always as well to refer to the old close times which were in force before the passing of the Act of 1861.

From this it appears that the close times were as follows :—

1. Tyne, September 10th to February 10th.
2. Coquet, October 10th to March 8th.
3. Tees, September 17th to February 14th.
4. Wharfe, September 27th to February 25th.
5. Ouse, September 25th to February 25th.

In former times it was the custom to fish rivers late into the season, the object then being to catch as many salmon as possible till the time came when they were unfit for food, little or no care being given to preserve a stock of fish as breeders for the ensuing seasons. By the Act of 1861 a universal close time was fixed, viz., from 31st of August to the 2nd of February. My colleague and myself, and a number of witnesses who appeared before the various committees of the House of Commons, made it evident that this plan would not suit all rivers alike. Certain rivers are now allowed to go on fishing with net till 15th September, and with rods will 15th November, *see* table of close times in Appendix. Acting under the powers given by the 39th section of the Act of 1873, the Tees Salmon Board made the following bye-law, " The annual close season for all modes of fishing, except " with rod and line, shall commence on the 15th day of September " and terminate on the last day of February, both inclusive, and " the annual close season for rods and lines shall commence on the " 15th day of November and terminate on the last day of February, " both inclusive.

"Penalties are imposed under the Salmon Fishery Acts, 1861–1873, for the breach of any of the provisions relating to the annual close season as fixed by this byelaw."

In considering the causes which make a river early or late, the physical conditions of the individual river must be taken into careful consideration :—First, therefore, the estuary of the Tees forms a convenient place where the fish coming from the open sea may rest, while waiting for the water coming down the river to attain conditions sufficiently agreeable for them to commence its ascent. The bottom of the sea in the estuary of the Tees, especially on the south side, consists in places of a dense jungle of huge sea weeds, among which the salmon doubtless obtain food and shelter during the summer months.

Other parts of the estuary consist of sand and sandy mud, producing lug worms and shrimps, the favourite food of salmon.

Mr. Robinson, lighthouse keeper, who has lived the last 17 years in the floating light boat at the fifth buoy, has watched the inward migration of the fish from the ocean. According to his testimony a few salmon could be seen jumping at the end of May, some in June, but it was July before they could be seen leaping in large numbers; in August they can be seen more frequently, and in September they begin to decrease and continue to decrease to the end of November. The meaning of this latter statement probably is that when the floods come down at the end of the year the salmon take the river at once and are seen no more from Mr. Robinson's observatory.

As regards the Tees itself, it appears that in dry weather an immense body of water descending from the upper country never reaches the sea at all. Mr. Dodds, M.P., informed us that the water was taken from the Tees two miles from Darlington, and that it was used in vast quantities for every domestic purpose for the entire district from Darlington, by Stockton, Middlesbrough, Eastern Junction, Coatham and South Stockton, Nawton, and other adjacent places. The water in the hotel of Coatham I observed was stained of a peaty colour, showing its origin from the upper Tees. The blast furnaces especially use a great quantity of this water.

It is therefore evident to me that in dry weather the fish will not take the Tees in this low state of water, which is also polluted by the sewage from Stockton and the thickly populated neighbourhood.

The evidence of the fishermen was somewhat as follows :—Geo. Hale, who fishes from Stockton Bridge to the Tees mouth, said that it did not pay to fish till the middle of July. In former times many fish were caught between the 1st and 17th of September. The fish are red in September. One witness was of opinion that this red fish was of a distinct species; this of course is a mistake, but at the same time it must be recollected that fish living on sandy estuaries for a considerable time during hot weather will often get red in their scales, though they may not as yet have lost much condition. He did not like that the Tweed should go

on fishing with nets in September when the Tees was not permitted to do so. A fishmonger named Burton, of Stockton, complained that he could not get salmon in March, April, and May from the Tees. In September he had to send for fish to the Tweed, while there were thousands of them in the Tees close handy. Other fishermen gave evidence to a somewhat similar effect, viz., that the river was naturally a late one.

Considerable stress was laid by many witnesses upon the fact that the presence of Dinsdale dam was the cause of the river being late. It was stated that this dam keeps the fish jumping for five or six weeks if a flood does not come. They spawn later than other fish, they are later going down, and therefore later coming up. I must, however, in this place observe that the dam is not probably quite as complete an obstruction as heretofore, for it is certain that the pass designed and erected by Mr. Cail has been of service by letting many fish past this dam. The Rev. Scott Surtees wrote to me in October 1874 :—

Dinsdale-on-Tees, Darlington,
October 22nd, 1874.

DEAR SIR,

As you have given considerable attention to Mr. Cail's pass at this place, I think you will be glad to hear of its continued success.

The fish have been up the river in very large numbers, and the upper reaches around Barnard Castle are swarming with them. This of itself is conclusive evidence in its favour. I have recently been spending a fortnight here, and have had every opportunity of watching the pass. I have constantly noticed the fish jumping *inside* the pools in the pass.

I got three persons to go over in the boat one afternoon and they found 12 in one pool at once. I went over one morning and watched the uppermost pool, which is four feet in water, and noted five jump in in about five or ten minutes. I think it might be improved upon by fixing a trough into the rock above the pass to communicate with the level of the dam, so as to prolong the fall of water, and cause a stream to overflow from that trough into the lower pool of the pass.

I was told also by a gentleman, who had seen it done in Norway, that if the rock was painted white to imitate a waterfall the fish would be attracted to the spot more readily ; however, as it is, they find it easily enough, and after a few days disappear, and are found in great numbers far above.

Yours faithfully,
SCOTT F. SURTEES.

It is evident that the fisheries of the Tees would be more abundant than they are at present if Dinsdale dam were removed. The removal of Bywell dam on the Tyne—sister river to the Tees—has without doubt added greatly to the increase of its fishings.

The pollutions from the "hush" from the lead mines must of necessity affect the fish very much ; and having heard that such vast quantities of the Tees water are utilized in every way for domestic purposes by such a vast number of people living at and about Stockton, I cannot perceive why they stand passively acquiescent and allow owners of lead mines to pollute the water supplied to their houses, when a remedy can be obtained by a requisite expenditure of money on the part of the mine owners.

No evidence as to the catch of the "hang net" was brought before us. In former times the estuary of the Tees was fished

by means of fixed engines. The hang nets now may be called floating fixed engines, and these no doubt catch a considerable number of salmon that are, as I have described before, waiting in the estuary for water to take them up. During droughty weather therefore the nets fishing in the river are handicapped, not only by natural conditions, but also by a certain proportion of fish being captured by the hang nets.

THE SEVERN.

For some time past the Severn has not been doing so well as my colleague and myself could wish, and we have been in frequent consultation with the chairman, Lord Northwick, the vice-chairman, Mr. Willis Bund, the clerk, Mr. H. George, and other members of the board upon this subject. It has fallen to my lot to pay special attention to this noble river. I now, therefore, beg to give a general view of it from source to mouth. The Severn is 178 miles long, and has a catchment basin of 4,437 square miles. In fact it is the largest, and with one exception the most important salmon river in the whole of England. The number of fish taken and the amount of license duty, (with the single exception of the Tyne), are the largest in any river in England and Wales. The river may be divided somewhat roughly as follows: From its source on the eastern side of Plinlimmon to Llanidloes, 12 miles; from Llanidloes to quitting Montgomeryshire, about 30 miles; across through Shropshire, between 60 and 70 miles; Stourport to Worcester, 13 miles; from Worcester to Tewkesbury, where the tideway begins, 12 miles; from Tewkesbury to Gloucester, 12 miles; Gloucester to Bollo Pool, the commencement of the estuary, 10 miles: Bollo Pool to the Bristol Avon, where the district ends, 25 miles.

The fish found in the Severn are: Salmon, two or three kinds of trout, grayling, shad, twait, lamprey and lampern, eels, roach, dace, gudgeon, bleak, jack, chub, carp, tench, perch, and sturgeon. From all I hear there are at present very few sea trout or bull trout, but in consequence of the large size of the mesh of the nets, two inches from knot to knot, it is difficult to say what number really exist, and Mr. Willis Bund informs me that he believes their number is increasing, as when using a small meshed net to catch coarse fish at Powick, they are occasionally met with. This was never the case until recent years.

The Severn salmon fisheries give employment to a large number of men, and the annual value of the salmon fisheries is very considerable. The importance of so large and increasing an industry it is impossible to over-estimate, both as furnishing an important contribution to the food supply of the country and an important source of employment: for the Severn possesses what is found on very few rivers in this country, an enormous stretch of open water free to the whole public. The very best of the Severn fisheries, the lave net fisheries, in

the estuary, are public, and therefore the public are interested in the prosperity of the fisheries of the Severn, more than in those of any other river. I have therefore no apology to make, as a public officer, for having devoted so much time and so much space in this report to its salmon fisheries.

I propose to give the results of my inspections and inquiries as to the present state and prospects of the fisheries of this most important salmon river, and to point out the reasons that tend to prevent the proper development of the same. These are:

1. Weirs.
2. Pollutions.
3. Absence of spawning ground.

1. With regard to weirs. The lowest weirs are the new weirs recently made at Maisemore and Lanthony near Gloucester.

I have twice last year examined these weirs, once in June and again in November The weir at Maisemore was built in the year 1872 in order to supply water for navigation purposes. Under the 17th section of the Severn Navigation Act 1869 (32 and 33 Vict. c. ciii.), the provisions of the Salmon Fishery Acts 1861 to 1873 apply to these weirs, and so a new pass, to be approved by the Home Office, must be placed on this weir. In June last my colleague and myself examined the pass which had been attached to it by Mr. Leader Williams, the engineer to the Severn Navigation Commission. At the weir we were met by a deputation of fishermen from Tewkesbury, who complained of the effect of the weir in wholly excluding fish from the river above the weir, except at spring tides. In ordinary states of the water at spring tides the tide flows over the weir, making the water below the weir very nearly level with the water above. In neap tides the tide only ascends about three parts up the weir. The pass made by Mr. Williams is situated on the south side of the weir, and it is built at an acute angle somewhat on the model of the quasi natural pass at Bevere. The great fault of the pass at my examination proved to be that there was no pool at the bottom, and so no run for the fish, and various other details required alteration in various important particulars so as to make it available for the passage of salmon at all states of the river. All these faults, however, disappear at spring tides, when the water is backed up against the weir by the tide or when freshes are coming down the river. At my visit in November the tide was running up with great velocity, and the weir was then hardly visible. This pass, (when the necessary alterations to make it effective are carried out, during the course of the ensuing summer, to the satisfaction of my colleague and myself,) will be approved by the Home Office.

The new pass, a diagonal board, at Llanthony weir continues to act in a satisfactory manner, as it concentrates the water flowing through a space cut into the wooden sill of the weir into the pool below. It is, however, right to observe that this branch of the river is not nearly so much frequented by the fish as the Maisemore

branch, and so is not so useful or important as a thoroughly satisfactory pass at Maisemore will be. (See Plan No. IV., p. 74.)

A large hole has been washed in the weir at Tewkesbury during the winter, which facilitates the ascent of the fish. I shall endeavour while it is under repair to get made what it so urgently requires, a pass on the western side. I have paid two visits to Diglis, the next weir on the river. Owing to the dry weather I was enabled to get into the pass situated in the middle of the weir. The total length of the pass is 51½ feet. This space is divided into four pools, each 5 feet wide. The pools are again subdivided by steps on the ladder-within-a-ladder principle, and the water is admitted into the pass through an opening 2 feet 2 inches wide by 16 inches deep. The top of the first pool is thatched over with boards, which act as a flood-guard to throw the water off from the pools below, and so prevent them being flooded. The exit of the pass is 1 foot 3 inches wide. At the time of my visit the pools were acting very well by means of this ladder-within-a-ladder principle, which, if I recollect right, I was the first to suggest. In certain states of water I feel convinced that the fish will have no difficulty whatever in getting over this weir by means of this pass, but only in certain states, and as it is essential they should pass over in all waters, this pass alone will not suffice. Inside of this pass I found that weed had grown to the thickness of several inches. Before I left the place this was cleaned out by the water bailiff and myself. This collection of weed being removed (though an apparent trifle), added considerably to the efficacy of the pass.

The pass built by Mr. Williams on the east side of the weir was, I found, acting fairly in low water. When I visited it in November, when the water was high, I was much pleased with its appearance, and in certain states of the water this pass is doubtless of great value. At the west end of Diglis weir a diagonal board has been placed by Mr. Williams. At certain states of the water the fish are able to run up the side of this board with ease, but in other states a wave is formed at the base of the board just where it is fixed to the lower sill of the weir. To obviate the effect of this wave, and to take off some of the rush of the water down the diagonal, boards have been fixed between the diagonal and the bank. From the top of the diagonal a portion of board has been removed, so that the water rushes over it into the pools between the diagonal and the bank. But this alteration has not increased the efficacy of the pass, as the fish ascend to a certain point and get no further. Much, therefore, still remains to be done before the fish can get over Diglis weir at all states of the water.

The next weir at Bevere requires no alteration.

At the next weir, Holt, Mr. George, the clerk, has altered the steps in the pass in the middle of the weir according to my suggestion, and has greatly improved it.

As regards Lincombe, the next weir, I understand that this weir, like Tewkesbury, has suffered a good deal from the winter

floods, and a large hole has been made in it. When the weir is being made good in the course of the summer I shall take advantage of the opportunity to endeavour to secure greater facilities for the passage of fish over this formidable and important barrier.

From this point the fish have a free run up to Pool Quay. They have, however, to encounter pollutions during their upper passage, especially those from the Stour at Stourport, which conveys into the river the refuse of the Kidderminster carpet manufactories, the tan-yards at Bewdley, the carpet-works at Bridgnorth, and tan-yards and dye-works at Shrewsbury. There is no good spawning ground throughout this extent of 30 miles. But I am informed by the officers of the board that the fish do spawn in this part of the river. The fish, however, persist in attempting to get up a little brook called the Dowles brook, just above Bewdley, and for the first time I have found out why they try and get up this brook. (See page 37.)

At the special wish of Mr. Cholmondeley, of Condover Hall, Shrewsbury, who has recently been made one of the Conservators of the Severn Board, I have inspected a brook, which falls into the Severn near Wroxeter, from the westward, a little way below Shrewsbury called the Cound brook. Throughout its whole extent it contains excellent spawning grounds. These, however, are shut off from the main river by means of two very high upright stone weirs, each commanding a bifurcation of the stream. The salmon, I understood, sometimes come up as far as these weirs. Mr. Cholmondeley is laudably anxious they should pass the weirs, and come and spawn in the brook, as it runs through his property, Condover Hall. The total length of the Cound brook is about 18 miles. The weirs are 6 feet high and 32 feet across. It is impossible to fix a ladder to either of these weirs, but luckily there is a stone byewash commanded by a hatchway at the upper entrance. Each byewash is in fact a tunnel 2 feet 6 square, and length about 7 feet. In very low water the entrance to these tunnels is between 3 and 4 feet, and it would be as easy as possible to place a pass at the exit of each tunnel, so as to pass the fish up. The pass I would recommend would be in the form of one or two large boxes, into which the salmon would leap, and from thence pass through the tunnel in the autumn and winter time. It will be only necessary to raise the hatchway, when water can be spared from the mill, so that a stream would run through the tunnels. In this manner it is certain that fish may be passed upwards. Not only Mr. Cholmondeley, but also the riparian proprietors of the spanwing grounds above, would, so it was stated to me, protect the fish if passed up to them. This matter will again be brought before the Severn board, and should they think it advisable, I trust Mr. Cholmondeley will fix passes at his own expense. For my own part I consider it most desirable that Cound brook should be opened up. I, however, understand that the Severn board have, acting on the advice of their officers, purposely abstained from allowing the fish to pass up the brook, as they are unable, from

want of funds, to protect them when they have got up. I trust, however, this difficulty will be removed.

The weir at Pool Quay, the next above Lincombe, belongs to Lord Powis. The pass in the weir which Lord Powis built is made on the old-fashioned lines, and yet is capable of very great improvement at a very small cost. I have pointed out to Mr. George how the improvements may be effected, and trust that they may soon be completed. A secondary weir has also been built below the main weir. Greatly assisted by this secondary weir, in floods, and the deep pool below this long sloping pass, the salmon get over in considerable numbers, but, like the other weirs below, they cannot, as they should be able to, pass at all states of the water. I hope I may, however, soon be able to report that this desirable result has been attained.

The next weir at Glenhafron had a pass approved by the Secretary of State made in it in 1870 upon the pool system, and I believe that it answers very well, and that the fish find little or no obstruction at this weir.

Arriving at Penarth they find the admirable pass built by Mr. Jebb, engineer of the Shropshire Union Railways and Canal Company. This pass (of which there is a model in my museum) is made round one side of the weir (see plan No. V., p. 76), and the fish now have no difficulty in passing from the natural pool below into the various chambers of the pass, and thence out into the river through the hatchway which commands the supply of water to the pass.

The small weirs at Newtown offer little or no difficulties in times of floods, but they are capable of improvement to meet the conditions of lower states of the water, and certainly should be looked to, especially Tibbett's weir.

The weir at Milford, next above, is built after the fashion of a wall. It is supported by timbers placed upon the rocks below, and has a shelf projecting, which, in itself, plus the height of the weir, is a great hindrance to salmon when leaping at the weir.

The pass round the side of the weir at Penarth having proved such a success, I am happy to be able to report that a sister pass has been rather dug out than erected at Milford. This pass is now completed on the south side of the weir. It consists of pools, each being about three feet deep. The fish have to jump six steps of 10 inches in height: the bottom jump is 6 inches only. The level of the top step of the pass is on a level with the weir itself. It was impossible, even if it has been deemed advisable, to arrange this otherwise. The water diverted by the weir from the river drives the wheel at an important flannel factory. The cost of the pass has been defrayed in a most liberal manner by Mr. Jones, owner of the adjoining property.

In ordinary floods, however, there would be about 3 feet of water running over the weir, and the water taken at the time by the opening of the pass would be quite sufficient to work the pools.

The walls of the pass are, however, of such a height that I do not fear the flooding of the pools.

The water flowing down the pass does not direct itself immediately into the pool below the weir, it is therefore made to flow in the direction of the spot where the fish would be congregated by means of a baulk of timber pinned on to the rocks.*

The next weir above this is at Llanidloes, 11 miles by road and 15 or 16 by water. The Llanidloes weir is a natural obstruction. It might be possible to make it passable for salmon, but the Severn board and myself do not at present think it desirable so to do, as the bed of the river above consists more of rock than of gravel fit for spawning, and the refuse of lead and copper mines are poured into it, and the board are not able to properly protect the water above.

The tributaries available for the salmon between the new pass at Milford and the block at Llanidloes are the Clwydog, the Taranyon, the Ceryst, and the Carno. A fair idea of the quality of the spawning grounds can be obtained by the observer from the railway carriage between Llanidloes and Moat Lane Junction, and also from Moat Lane Junction, going westward by the Newtown and Machynlleth Railway. I am perfectly convinced that if the salmon get over Milford pass the opening up of these spawning grounds will be of great advantage to the stock of fish.

The Ywrch, another tributary in the vicinity, does not contain good spawning grounds.

The Verniew is one of the most important breeding tributaries of the Severn. I have examined two passes on this river, viz., Llansaintfraid and Pontyschowryd. Pontyschowryd was blown down some time since, and has now been rebuilt. At one end of it is a quasi pass which is of no practical use, being simply a long open free run, with an arm projecting from each side of the top to collect the water, each arm being 15 ft. long, leaving a space of 39 ft. The pass is 47 ft. long, and 10 ft. 5 in. wide. Having examined the weir, I came to the conclusion that the proper place for a pass was the south-west corner. By a judicious arrangement of the rock at the base of the weir, and at about the middle, and the placing of a diagonal board 36 ft. in length, the ascent of the fish will be greatly facilitated. The agreement at my visit was that the owner, Captain Mytton, consented to make a groove on the south side of the weir, and to allow the Severn board to make what alterations they like in the present pass, provided they would guarantee him against any damage that might be caused by it to the weir. But I hear that some difficulties as to carrying out this arrangement exist, and that nothing has yet been done. I have hopes that in the course of next summer something will be done to open up the Verniew.

The sluice gate at the weir at Llansaintfraid has been con-

* I have lately examined this pass. With a few alterations in detail it will be as good as that at Penarth.

verted into a series of boxes. At my visits in May last I found that these alterations had been carried out, except as to a very important detail, viz., the formation of a pool so that the fish could jump into the lower box. This will be done during the ensuing season. The proper cure for Llansaintfraid, without hesitation, will be the formation of a secondary weir just where the river narrows below the weir. There are plenty of stones close handy available to do this. I trust, therefore, that the building of this secondary dam will not long be delayed.* I am glad to hear from Mr. A. George, the superintendent of the Upper Severn, that in the spring of 1864, especially in April, more smolts went down towards the sea than has ever been known before. There are still some 20 miles of the Verniew that the Dolanog dam renders nearly inaccessible to salmon.

The other important breeding grounds in the Upper Severn are the Bechan, of which about 2 miles are cut off by a Factory Weir; the Mule, of which only 1 mile out of 6 are available, from the same cause; the Rhiew, of which 9 out of 12 miles are cut off; the Banw, of which 20 out of 25 miles are inaccessible from Llanfair Weir; the Tanat, of which Llangedwyn cuts off 10 miles out of 25; the Cain, of which only 3 miles out of 10 are open; the Rhaiadr, of which only 1 mile out of 6 is available; the Cynlleth, of which 3 miles out of 6 are available; and the Avesh, of which only ½ a mile out of 4 is available. This gives 153 miles of spawning ground, of which only 60½ is available for fish; in other words, about two-thirds more spawning ground might be added to the Upper Severn.

The Severn board gives two reasons for not opening out the rest of these tributaries: 1st. The want of funds to build fish passes; 2nd. The want of means to protect the fish if they are allowed to go up.

In the eight years of their existence, out of an average income of about £620 they have spent an average of £480 in protection, which after the necessary expenses of carrying on the board, leaves little for building fish-passes. At present the staff of water bailiffs is wholly insufficient, and they have been obliged year by year to reduce that scanty staff, so that now it only numbers about 15. At present they say that to some slight extent they can protect the fish, but if they undertook more work, the present protection of the fish, inadequate as it is, would be less.

The most important breeding tributary of the Severn is unquestionably the Teme; throughout its whole length, some 60 miles, there is magnificent spawning ground, and this valuable river is almost wholly free from pollutions; it joins Severn 12 miles from Tewkesbury, the head of the Tideway. Unlike the Severn, with a very small exception near its mouth it is all private property, and is most strictly preserved. In the first three miles of its course, from its junction with the Severn to the lowest weir at Powick

*This secondary dam has now been partially made. It has improved matters very much.

there is some very valuable spawning ground, where I do not hesitate to say a very large proportion of the Severn salmon are bred. This part of the river the property of Mr. Willis Bund is usually swarming with smolts, and in the autumn and winter months thronged by the breeding fish. Far more breeding fish than clean fish ascend the Teme. I must defer for another year a detailed report upon the Teme and its tributaries. These possess some 93 miles of spawning ground, of which only some 12 are available for fish.

We have here to contend with another great source of difficulty, the non-co-operation of the upper proprietors. The Teme and its tributaries form some of the finest trout and grayling fisheries in England, and the Lentwardine and other angling clubs are averse to having this fishery spoilt, as they allege it would be by the river being opened up for salmon. So here the board has to contend not only with insufficient funds, but also with the antagonism of the upper proprietors.

With regard to the pollution of the Severn, the water coming over Milford weir is reported to be sometimes stained with washings of lead ore from the Van mines; I therefore inspected these mines. There were eleven large catch-pits, but most of them were nearly full of the usual white mud, the result of lead ore washings; the water runs from these pits down a long and narrow brook into the river below, and as I passed up this brook the water seemed quite white. It is therefore most desirable that these pits should be worked on the alternate system, so as to allow the mud to subside before the water is run into the brook.

In the summer months, when water is scarce, this brook is nearly clear, as the water is used over and over again in the works. The salmon fry, therefore, hatched out from fish that have came over Milford will have pure water during a great proportion of their first existence.

The debris from the crushing operations of the Van mines are not allowed to pass into the river. It is here made into bricks, the proportions being two shovelfuls of sand, half a barrowful of slime.

These are mixed together by a stone turned by a donkey, and costing 1*l.* 2*s.* 6*d.* per thousand for manufacture, are afterwards worth 2*l.* 5*s.* per thousand. This is an excellent example of how waste products may be utilized, and well worthy of imitation by other owners of lead mines.

Having written to the agent of the Van mine to know if our suggestions had been carried out, I have great pleasure in publishing his answer.

"The Van Mining Company Limited,
Van Mines, Llanidloes,
Frank Buckland Esq. Feby. 20th 1875.

DEAR SIR,

YOURS is to hand, in reply to which we beg to say that the catch-pits have been made, and have answered admirably in the filtering, but they are very awkward to clean out, being so large and deep.

Their size are 1,200 and 2,400 square yards respectively, and on the average 6 to 7 feet deep, but these are much too large for practical work, as they cannot be cleared out under very great expense.

I have the honour to remain,
Your obedient servants,
WM. WILLIAMS,
Manager."

The Severn board should be most particular in looking after the pollution of the upper streams from lead ore, as by means of dirty water and slime sent therefrom, the spawning beds get silted up and destroyed.

The board has devoted some attention to this matter, and they thus describe the pollution of the Severn from its source to where it enters Worcestershire :—

"The chief causes of pollution to the Severn from its source to Bewdley, where it enters Worcestershire, are three—

1.—REFUSE FROM MINES.
2.—REFUSE FROM MANUFACTURES.
3.—TOWN SEWAGE.

With regard to the first there are some twelve mines, the refuse from which injuriously affects the Severn and its tributaries. The most important of these are—

(1.) LEAD MINES.

The Van mine and the Central Van on the Cyrest brook.
The Van Consols on the Clwyedog.
The Aberdinant on a tributary of the Clwyedog.
The Bryn Postig, East Mid Wales, Mid Wales, and Fedw, on a small tributary of the Severn.
The East Llangynog on the Rhayadr.
The Llangynog on the Tanat.
A mine on a tributary of the Ruarth.
The Nant Ricket Copper and Lead Mining Company at the foot of Plynlimmon.

In addition to these are numerous mines which are either not worked at the present, or if worked have not found lead in sufficient quantities to render the washings injurious. The mines at present actively injurious are the Van, the Van Consols, the Aberdinant lead mine, and the East Llangynog.

At the Van mine this summer one of the large settling pits burst, and caused a serious pollution. This damage has now been repaired, and both settling pits are again in operation, and are effective. The dry summer, and consequent scarcity of water, has caused the same water to be used over and over again, and it has therefore flowed into the river far purer than usually is the case.

At the Van Consols, although the directors have been most desirous to prevent injury arising from the mine, and have made various settling pits, there is room for further improvement, and the pollution from this mine would be considerably reduced if alterations were carried out to reduce the fall.

At the Aberdinant lead mine but little is doing, and the pollutions are only occasional.

At the East Llangynog mine the settling pits are too small and too few, and proper attention is not paid to them. If one or two large settling pits were made, and carefully supervised, the pollution from this mine would be rendered much less injurious.

Besides the mines above-mentioned there are several others which, if worked would be great sources of pollution, but at present they are not productive. At other mines where lead is found it is not found in sufficient quantities to pay for washing on so large a scale as to be injurious. The result is that at this time above Llanidloes the pollutions are practically confined to the Clwyedog

But all the mines require constant inspection and attention to prevent new sources of pollution arising.

(2.)—Refuse from Manufactories.

The manufactories in the part of the district to which this report refers that are at the present time actively injurious are—

Newtown :—Welsh Woollen Manufacturing Co., Messrs. Jones, Evans, and Co.'s flannel-works, and Lewis and Co.'s tan-yards.

Shrewsbury :—Mr. Hudson's tan-yards, Mr. Lee's tan-yards, Great Western Railway refuse of grease filtering, Messrs. Marshall and Co.'s dye refuse.

Bridgnorth :—Mr. T. M. Southall's carpet-works.

Bewdley :—Several tan-yards.

(3.)—Refuse from Town Sewage.

Llanidloes, Newtown, Welshpool. Shrewsbury, Bridgnorth."

In addition to the pollutions mentioned here there are serious pollutions at Worcester, Gloucester, and elsewhere.

The reasons, therefore, of the non-increase of salmon in the Severn may be thus summed up. First. Weirs which impede the upward progress of the fish, and at the same time back up the water so as to convert what would be otherwise a rippling stream into stagnant water. Thus at the same time pike and other enemies of the salmon increase in numbers.

3. The spawning grounds are proportionately small, and even these are blocked by formidable weirs. Pontyscowrhyd, to wit, is a formidable barrier to that noble river the Verniew, Powick, to that still more valuable river the Teme.

The spawning grounds of the Severn are—with the exception of the Teme—all above Shrewsbury, and the fish have therefore nearly 100 miles to ascend before they can deposit their ova. As the ova ripens inside the salmon, more or less pain is caused to the parent, which prompts it at all hazards to seek the first spawning ground. It is for this reason, I am certain, that the fish whose ova are ripe now attempt to spawn in the Dowlais brook and in the Cound brook, and the lower part of the Teme. The Severn board, therefore, must excuse me if I urge upon them the necessity of paying more attention than ever to these two brooks and the Teme.

The fact is that the general result of my investigation is that the spawning ground available for salmon in the Severn is small compared to its size. The greatest possible attention should be given to the cultivation of what spawning grounds exists; and to this object I would most earnestly direct the attention of the Severn board, as I have shewn, out of the 290 miles of spawning ground the Severn possesses, only 75 is accessible to the fish. That this spawning ground could be opened there can be no doubt; and I would especially urge upon the board to do this; and I really believe that the true secret of success in the case of the Severn is the opening out and cultivation of the Teme. A third reason is, the distance of the larger part of the spawning ground from the sea, and a fourth, the pollution from which the river suffers from the various causes I have mentioned above, extending from the lead and other mining pollutions at its source to the sewage of Gloucester at its mouth.

Not feeling satisfied with the state of the Severn fisheries, and being desirous of knowing what is the opinion of those who, from local knowledge, were competent to judge on the subject, I sent a letter to Mr. Willis Bund, the vice-chairman, stating my view, asking him to give me some information as to the Severn fisheries, and what, in his opinion, were the causes that prevented the Severn making satisfactory progress, and have received from him the following reply:—

3, Old Square, Lincoln's Inn, W.C.,
March 17th, 1875.

SIR,

IN reply to your enquiry as to the state of the fisheries in the Severn, I do not altogether share in your feeling that the river has not been doing so well lately as could be desired, for I think that the river shows signs of improvement.

I have prepared a series of tables which will, I think, bear out my views on this matter, and, in reply to your question, will, with your permission, point out one or two of the causes that tend to retard the progress of the salmon fisheries of the Severn.

The returns extend over a period of seven years, and I think show clearly that, thanks to increased preservation, the fish, both in size and number, in the Severn are increasing, while the licences, except as to one item, remain nearly stationary.

I must premise that the question of the condition of the Severn being prosperous or otherwise is not really shown either by the take of fish or by the number of licenses issued. A very dry season always increases very largely the take of fish and the number of licences,—the take of fish, because the fish being detained in the estuary, and congregated in a short distance, are caught there in greater numbers than if they were distributed over the whole river; the number of licences, because in a hot summer the fish being seen in large quantities in the estuary, the fishermen in public waters take out licences for lave nets to a greater extent than they otherwise would do. Indeed, the question of licences as to a good or a bad year on the Severn depends almost solely as to the lave nets licences.

These licences are also affected by the state of trade in the Forest of Dean. If trade is brisk, the men get better wages at the mines and works than at fishing; if trade is slack, or if there is a strike or lock-out, large numbers resort to fishing for a livelihood.

Therefore, the apparent prosperity of the fisheries of the Severn depends on exceptional circumstances, and not upon causes over which the Conservators have any control, and it must be always borne in mind that the real prosperity does not depend on the number of fish caught or the number of licences issued, but on the increase of the stock of fish in the river. If I am right in this conclusion, it follows that no one not well acquainted with the district can form any opinion as to its prosperity. I believe that the Severn fisheries are improving, and I base my opinion upon the facts that—

1. Very large numbers of samlets have for the last five or six seasons been bred in the Severn and its tributaries, and observed going down to the sea far more than have been observed in previous years.

2. The increased preservation of the old fish has led to the great increase in size of the fish, and the very high average of late years.

3. The absence of systematic poaching in the upper district. This, I believe, is the true secret of the improvement in the Severn fisheries. There are few if any, of those large gangs of men who poach this water in the way so common on other rivers. I regret, however, to state that a gang have lately made their appearance in a district in which they were formerly unknown.

4. The increased facilities given to fish to ascend the rivers, although far from efficient, yet still in some degree tends to the improvement of the fisheries.

The chief causes that retard the progress of the Severn fisheries are in my opinion the following:—

1. The inadequate sum at the disposal of the Board for protection of the

river. It is too absurd to think that with 400*l.* a year 4,437 square miles can be protected.

2. The great extent of public water extending from Tewkesbury to Welchpool. In this water anyone can fish, and as long as he does not avowedly fish for salmon is under no obligation to take out a license. A great quantity of this unlicensed fishing exists, and the fact that each year the licences in fresh waters fall off, while the fishing increases, proves that this is a cause the Board are powerless to prevent. The Board framed a byelaw to meet the case, but the Secretary of State, after an inquiry by the inspectors, declined to allow it.

3. The length of water the fish have to traverse before they reach any spawning ground. Except the Teme there is no spawning ground until the fish get past Bewdley, nearly 40 miles above Gloucester, and each mile the fish go new enemies in the shape of nets or other devices for their capture arise. As to the Teme, upon which the Severn so much depends for its supply of salmon, in addition to the almost impassable weirs upon it, there is the determined opposition of the landowners against allowing salmon to come up, lest the trout and grayling fishing should be destroyed.

With a river like the Severn no extension of weekly close time would make any difference, and until something could be done to regulate the inland fisheries as is done on the Thames, the Severn will never produce its proper supply of salmon.

The regulations now in existence as to these fisheries are contained in the statute 18 Geo. III. c. 33, a copy of the main provisions of which I have appended to this letter. (See page 41.)

There are also on the Severn the same difficulties that other rivers have to contend with, weirs and pollutions, but the latter, except at the source of the river, do not at present do very serious damage. The former, however, have a most deleterious effect in three ways. (1) In obstructing the free passage of the fish and preventing their even distribution throughout the distance; (2) in making the Severn the finest canal in England; and (3) in increasing very largely the number of coarse fish and rendering a large extent of the river wholly unsuitable for salmon.

I have the honour to be, Sir,
Your obedient servant,
J. W. Willis Bund,
Vice-Chairman Severn Fishery Board.

F. Buckland, Esq.,
Inspector of Fisheries.

ENCLOSURE.

1.—*Revenue of the Board from Licences.*

	£	s.	d.
1867	635	5	0
1868	648	3	0
1869	629	10	0
1870	662	0	0
1871	716	12	6
1872	565	5	0
1873	514	15	0
1874	618	16	0

2.—*Proportion from Tidal and Non-Tidal Waters.*

	Non-Tidal.			Tidal.		
	£	s.	d.	£	s.	d.
1867	141	10	0	493	15	0
1868	119	0	0	529	3	0
1869	119	0	0	510	10	0
1870	108	10	0	553	10	0
1871	91	0	0	625	12	6
1872	84	10	0	480	15	0
1873	78	0	0	436	15	0
1874	85	9	0	533	7	0

3.—*Revenue from Rods and Lines at 10s. each.*

	£	s.	d.
1867	48	10	0
1868	35	0	0
1869	32	0	0
1870	29	10	0
1871	19	0	0
1872	16	10	0
1873	17	10	0
1874	20	10	0

4.—*Revenue from Fixed Engines.*

	£	s.	d.
1867	198	0	0
1868	278	2	6
1869	221	10	0
1870	220	10	0
1871	231	12	6
1872	207	12	6
1873	207	5	0
1874	236	6	0

5.—*Revenue from Lave Nets at 2l. each.*

	£	s.	d.
1867	148	0	0
1868	176	0	0
1869	178	0	0
1870	218	0	0
1871	272	0	0
1872	138	0	0
1873	114	0	0
1874	210	0	0

6.—*Revenue from Fines.*

	£	s.	d.
1867	12	3	0
1868	37	3	6
1869	48	15	1
1870	32	0	0
1871	38	6	0
1872	9	0	0
1873	15	10	0
1874	10	3	6

7.—*Fixed Engines.*

Total number found legal by the Special Commissioners.

Weir trap	1
Putts	343
Putchers	7,261
Leaders	17
Stop nets	22

4 putts, 780 putchers, and 4 stop nets are also used in the Crown fisheries, into which the late Special Commissioners did not inquire.

8.—*Number of Fixed Engines in Use.*

	Weir Trap.	Stop Nets.	Putts.	Putchers.	Leaders.
1867	1	16	238	4,680	13
1868	1	20	217	5,180	15
1869	1	18	220	5,130	15
1870	1	20	212	4,880	14
1871	1	19	245	5,350	15
1872	1	20	238	4,600	14
1873	1	16	250	5,030	14
1874	1	16	255	5,280	14

9.—*Fish taken.*

1867. Unascertained; supply fair.
1868. Upper waters, about 458; no return for lower waters.
1869. For both tidal and non-tidal, 11,460.
1870. „ „ „ 22,500.
1871. „ „ „ 16,900.
1872. „ „ „ 9,050.
1873. „ „ „ 19,400.
1874. „ „ „ 16,500.

10.—*Average Size of Fish.*

1867, 1868, 1869 } No return.
1870 - - - - - - - 11½ lbs.
1871 - - - - - - - 13 „
1872 - - - - - - - 16 „
1873 - - - - - - - 14 „
1974 - - - - - - - 13 „

11.—*Value of Fish.*

1867, 1868 } No return.
1869 - - - - - - - £8,000
1870 - - - - - - - 13,000
1871 - - - - - - - 11,200
1872 - - - - - - - 8,000
1873 - - - - - - - 10,000
1874 - - - - - - - 10,500

12.—*Seasons.*

1867. No information.
1868. Dry.
1869. Dry.
1870. Very dry.
1871. Moderate; occasional fishes.
1872. Very wet.
1873. Cool; occasional fishes.
1874. Wet spring; dry summer.

Severn Fishery Act, 18th Geo. III. c. 33. A.D.

ANNO DECIMO OCTAVO GEORGII III. REGIS.*

Cap. XXXIII.

An Act for the better Preservation of Fish, and regulating the Fisheries, in the Rivers Severn and Verniew.

Preamble.

Whereas by an Act passed in the first year of the reign of Queen Elizabeth, intituled "An Act for preservation of Spawn and Fry of Fish," it is enacted that no person shall fish, or take fish, with any net or engine, but only with a net or tramel whereof every mesh or mash shall be two inches and an half, angling excepted: and whereas by an Act passed in the thirtieth year of the reign of King Charles the Second, intituled "An Act for Preservation of Fishing in the River Severn," the size of the meshes as limited by the before-mentioned Act is confirmed, and provision made against fishing with nets in the river Severn below Gloucester Bridge of more than sixty yards in length, and above Gloucester Bridge of more than fifty yards in length, to Ripple Lock Stake; and from thence up the said river to twenty yards in length: and whereas before the navigation of the said river below Gloucester Bridge was increased to the degree it now is, there were many weares in the said river, the remains of which still appear, whereby the passage of fish up the said river was confined,

Recital of Act 1 Eliz. and 30 Car. II.

* The 39th section of the 24 & 25 Vict. c. 109 repealed so much of this Act as related to salmon, the remainder of the Act is still law. The repealed parts are left out.

and nets of the limited length were then sufficient for the purpose of taking fish: and whereas the said river is in many parts below Gloucester Bridge now greatly widened, and continues yearly widening, by frequent floods and by tides which come up with great violence, and thereby wash away, undermine, and throw down the banks on both sides of the said river, and are liable so to do at many different and uncertain places; and ever since taking away the said weares nets of a much greater length have been and are now used, as being absolutely necessary for taking of fish in the said river: and whereas several sorts of fish, not mentioned in the said Acts, particularly lampreys, shads, and twaits, which, at certain seasons in the year, come up the said river in great quantities, cannot be taken with nets of the length and size of the meshes limited by the said Acts, to the great prejudice of the proprietors of, and other persons interested in the said fisheries on the said river, and also of the publick: and whereas there are many proprietors of ancient fisheries in the said river below Gloucester Bridge, called Putt Fisheries, in which putts at some particular places are fixed an inside wheel or diddle, whereby great quantities of the spawn or fry of fish are taken and destroyed when they go down into the salt water: and whereas the manner of using nets, and of fishing, in the said river Severn, and also in the river Verniew (which runs into and communicates with the said river Severn) are found to be injurious: Wherefore, and to the end that the mode of fishing in the said river Severn, and also in the river Verniew, which runs into and communicates with the said river Severn, may be properly regulated, and the spawn and fry of fish therein be preserved, may it please your Majesty that it may be enacted, and be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, that so much of the said before-mentioned Act, passed in the first year of the reign of Queen Elizabeth, intituled "An Act for Preservation of Spawn and Fry of Fish"; and also so much of the before-mentioned Act, passed in the thirtieth year of the reign of King Charles the Second, intituled "An Act for Preservation of Fishing in the river Severn," as relates to the length of the nets, and the size of the meshes thereof, allowed to be used in the said river at particular times and places.

Putt Fisheries described.

Restrictions contained in Act 30 Car. II. inurious.

So much of Acts 1 Eliz. and 30 Car. 2. as relate to length of nets and size of meshes, below the bridge, &c. repealed.

And be it further enacted by the authority aforesaid, that if any person or persons shall, at any time hereafter, within the months of August, September, or October, lay, draw, use, or fish with, any kind of net, engine, or device whatsoever, in the rivers Severn or Verniew; or if any person or persons shall at any time hereafter fix any net or nets, with or without cod or cods, or make, set up, or fix any hedge or hedges, bank or banks, or stanks, in or across the said rivers Severn or Verniew, or any part thereof; or if any person or persons shall, at any time hereafter, in the months of February, March, April, or May, lay, draw, make use of, or fish, in the said rivers, or either of them, with any net, the meshes whereof shall be under one inch and three eighth parts of an inch square by the standard, and not extended, or five inches and an half round, allowing to each mesh four knots; or if any person or persons shall, at any time hereafter, in the months of November, December, January, June, or July, lay, draw, make use of, or fish, within the said rivers, or any of them, with any net, the meshes whereof shall be under two inches and an half square by the standard, and not extended, or ten inches round, allowing to each mesh four knots; or if any person or persons shall, at any time hereafter, lay, draw, make use of, or fish with any net, in the said river Severn, of a greater length than double the breadth of the river Severn at high water, at spring tides, at the several places where any fisheries now are, or that or may at any time hereafter be made, set up, or used, respectively, at the respective landing parts or places thereof, between Gloucester-bridge and a certain place on the bank of the said river Severn, called Limper-street hill, in the parish of Westbury, below the fishery at Bollow, or of a greater length than two hundred yards, from Limper-street hill aforesaid, down to a certain place in or on the side of the said river Severn, called the Hock Crib; or if any person or persons shall, at any time hereafter, lay, draw, make use of, or fish with, any net in the said river Severn, above Gloucester-bridge, up to the said place called Ripple Lock Stake, in the county of Worcester, of a greater length than seventy-five yards; or if any person or persons shall, at any time hereafter, lay, draw, make

Regulations, relating to the time of fishing, the size of the meshes, &c.

use of, or fish with, any net, in any part of the said river Severn above Ripple Lock Stake aforesaid, or in any part of the said river Verniew, of a greater length than forty yards, where there are no shoals or fords, or where there are any shoals or fords in the said river Severn, above Ripple Lock Stake aforesaid, or in the said river Verniew, shall, at any time hereafter, lay, draw, make use of, or fish with, any net of a greater length than twenty yards; or if any person or persons shall make use of more than one of any such nets at any one time, (that is to say) shall use, put, or throw out, at any of the respective fishery draughts in the said rivers Severn or Verniew, any net or nets whilst another net shall be drawing, and until the same shall be drawn out of the said rivers, or use two or more nets fixed together, or any drag-net, tramel, casting-net or cod or cods fixed to any net or nets, within either of the rivers aforesaid, or if any person or persons shall, at any time hereafter, in the months of March and April, use any putt, or permit or suffer any putt to be and remain in any part of the said river Severn, above Gloucester-bridge, or between the said bridge and the said place called the Hock Crib, unless the inside wheel or diddle of such putt shall be intirely taken out, and the bottoms of such putt only be cross-sprowed, of such a size and in such a manner as to permit the spawn and fry of fish, in those months, to go and pass through such putts without being stopped or taken; every person offending in any or either of the cases aforesaid, and who shall be convicted thereof before any Justice or Justices of the Peace of the county or place wherein the said offence shall be committed, either by view of such Justice or Justices, or by confession of such offender or offenders, or by the evidence of one or more credible witness or witnesses, upon oath, shall forfeit and pay any sum not exceeding Five Pounds, nor less than Twenty Shillings, besides the fish which may be taken, and the nets, engines, and devices, used in doing or committing the same, one moiety of the said sum to be paid to the informer or informers, and the other moiety thereof to be paid to the use of the poor of the parish, hamlet, or place where the said offence shall be committed.

Penalty on persons offending against the said regulations.

And whereas there are oftentimes obstructions in the fisheries in the said river Severn, below Gloucester bridge, by anchoring barges, trows, boats, and other vessels, in the fishing-draughts there, by the persons or crew on board, or belonging to such vessels, who demand fish from the fishermen to remove out of their fishing-draughts; be it therefore further enacted, that if any person or persons shall, at any time hereafter, wilfully anchor, or stop any trow, boat, barge, or other vessel, within any of the said fishing-draughts, it shall and may be lawful to and for any Justice or Justices of the Peace, within their respective jurisdictions, upon the oath of one credible witness, to summon the owner of such barge, vessel, trow, or boat, to appear at a certain time and place, to answer before him or them to such complaint; and upon the appearing, or not appearing, of such owner (on due proof upon oath of his being duly summoned), to enquire into and adjudge whether the same complaint be true; and, upon conviction of such offence, such owner shall forfeit and pay any sum not exceeding Twenty Shillings, nor less than Ten Shillings; and upon nonpayment thereof within three days, to cause the same to be levied upon the goods and chattels of the owner of such barge, vessel, trow, or boat, by distress and sale, in manner and form as other penalties are directed by this Act to be recovered and disposed of.

Penalty on persons causing obstructions in fishing-draughts by anchoring of vessels.

And be it further enacted, that if any net or nets whatsoever shall be found fixed across the said rivers, or either of them, or any part thereof, and it shall not be known to whom the said net or nets doth or do belong, it shall and may be lawful to and for any person or persons to take and seize such net or nets, and with all convenient speed to carry the same before some Justice or Justices of the Peace for the county, city, or place where the same shall be found; and if it shall appear to such Justice or Justices that such net or nets was or were found in either of the said rivers, and that such net or nets were of greater length, or the meshes thereof of less dimensions, than are by this Act directed and required, it shall and may be lawful to and for such Justice or Justices to cause the same (in his or their presence) to be cut to pieces, burnt, or otherwise destroyed.

Improper nets found fixed across the rivers may be destroyed.

Provided always, and be it further enacted, that nothing in this Act or any other Act contained shall extend, or be construed to extend, to hinder or

Angling allowed on certain conditions.

prevent any person or persons (except on Sundays) from angling, in the said rivers, or either of them, with a single rod and line only.

Proviso. Provided always, that nothing herein contained shall extend, or be construed to extend, to prevent any person or persons from selling any fish taken by angling.

Clause for preventing fishing i the night-time, and for otherways preserving the fish. And be it further enacted, that if any person or persons shall drag, throw, or otherwise make use of, any net or engine (except putcheons or wheels) of any sort or size, in the said river Severn, above Ripple-lock Stake aforesaid, or in the river Verniew, in the night-time, (that is to say) after sun-setting and before sun-rising; or shall, during the time of the spawning of fish, (that is to say) between the Tenth day of March and the Twentieth day of May, in any year, drag, throw, lay, or otherwise make use of, any sort of net, instrument, or other engine, in the fords, streams, or shallows, of the said river Severn, in the counties of Montgomery, Salop, Stafford, Worcester, or county of the city of Worcester; or shall use, place, or fix, any net in or upon any lands or grounds adjoining to the said river Severn, in the counties of Worcester, Stafford, Salop, or Montgomery, or in the river Verniew, in the time of any flood, unless the mesh of such net shall be of the dimensions aforesaid; or if any person or persons shall put, cast, or throw into the said rivers, or either of them, any lime, or other materials, in order to intoxicate, take, kill, or destroy, the fish in the said rivers, or either of them; or if any person or persons, within the counties of Worcester (city of Worcester) Stafford, Salop, and Montgomery, shall set, put, affix, or place, any net or other engine at the mouth or entrance of any river, brook, or stream of water, running into the said river Severn, or into the said river Verniew; or if any person or persons shall use any wheel or other engine, at any mill erected or to be erected on the said river Verniew, in order to take or kill any sort of fish, or shall use any net or engine whatsoever for the purpose of taking or killing fish of any sort in the said rivers, or either of them, above Ripple-lock Stake, on a Sunday; or if any person or persons shall make use of any light or spear, for taking or killing any sort of fish in the said rivers, or either of them, except for spearing of eels in Gloucestershire; all and every person and persons offending in any of the cases aforesaid shall, for each and every such offence, forfeit and pay any sum of money not exceeding Five Pounds, nor less than Forty Shillings.

Stakes to be fixed in the river, to preserve the fry and breed of fish. And be it further enacted by the authority aforesaid, that it shall and may be lawful, for any one or more Justice or Justices of the Peace for the said county of Montgomery, to order and direct any number of stakes to be given and fixed in any place in the said river Verniew, and at any place in the said river Severn, above Pool-quay, as to them shall be thought most convenient, for preserving the fry, spawn, and breed of fish; and in case any person or persons shall remove, loosen, or pull up, any stake or stakes which shall be so driven or fixed by the order and direction of such Justice or Justices as aforesaid, unless by the order and direction of some Justice or Justices for the said county of Montgomery, every person so offending shall forfeit and pay any sum not exceeding Forty Shillings, nor less than Ten Shillings, at the discretion of the Justice or Justices before whom such person or persons shall be convicted.

Proviso. Provided, that where any offender in the said river shall be punished by force of this Act, he shall not be prosecuted, nor incur the penalty of any other law or statute for the same offence.

This Act not to affect any ancient putt fisheries, except as aforesaid. Provided also, that this Act, or anything herein contained, shall not extend, or be construed to extend, to affect any ancient putt fisheries upon the said river, except as to the alteration in the putts between the particular places and in manner herein-before mentioned; but that it shall and may be lawful for the owners and proprietors to use the same in such manner as they might have done in case this Act had not been made (except as aforesaid).

Beginning and ending of the Lord's Day Provided also, that the observation of the Lord's Day (commonly called Sunday) shall, within the intent and meaning of this Act, be deemed and taken to commence and begin at Six of the clock in the morning, and to end at Six of the clock in the evening.

Proviso. Provided also, that nothing in this Act contained, with respect to the length of the nets and size of the meshes, or mode or times of fishing, shall extend to any place between Beachley-point and the Severn sea.

Provided likewise, that this Act, or any thing herein contained, shall not extend, or be construed to extend, to affect the use of nets for taking shrimps, or baits or nets for small coal only; all which nets shall not exceed three yards in length, or two yards in circumference, in the said river Severn. This Act not to extend to shrimp nets.

And be it further enacted, that this Act shall be deemed a publick Act; and be judicially taken notice of as such, without the same being specially pleaded. Publick Act.

It is satisfactory to find that Mr. Willis Bund agrees with me in much of the causes that I have assigned for the present unsatisfactory state of the Severn, and I trust that he will co-operate with me in inducing the board to remove them.

In October last I held an inquiry at Lydney into the advisability of adopting a byelaw made by the Severn Fishery Board, reducing the size of the mesh of net from 2 inches to $1\frac{1}{2}$ inches from knot to knot, and I took a considerable quantity of evidence on the subject of the existing fisheries of the Severn.

Mr. Willis Bund, who appeared on behalf of the Severn Fishery Board, stated that the question was one of considerable difficulty, and that the Board desired the whole case, both for and against the byelaws, to be laid before me so that I might have all the materials upon which to form an opinion upon the subject; the reasons alleged in favour of the byelaw were:—

(1.) That the only mode of fishing in the upper waters of the Severn was by means of a coracle net trammel, that this net with a linnet of 2 inches from knot to knot had been held in "Dodd v. Armour" to be illegal, and that if a larger mesh was used for the linnet the fish did not take it so well.

(2.) That the Severn Act, 18 Geo. III. c. 33, allowed a $1\frac{3}{8}$-inch mesh to be used for all fish besides salmon, that salmon were frequently caught in these nets.

(3.) That a large quantity of poaching went on by the use of these small-meshed nets, persons saying they fished for coarse fish, while in reality they fished for salmon.

(4.) That by the small-meshed nets not requiring a license the Board were defrauded of a very large part of their revenue, as persons using these nets did not take out a license, and if they caught salmon, unless a water bailiff was near, they did not return the fish to the water.

(5.) That in the first year of the Board's existence it was considered by the fishermen that that all nets capable of taking salmon required a license, and so licenses were taken out for these small-meshed nets, and the revenue from fresh water amounted to 141*l.* 10*s.* As they have found that the law can be evaded the revenue now is only about half that sum, while there is really more fishing.

(6.) That in the spring of the year large numbers of shad and twait run up the river, these fish can only be caught with a small meshed net. That during that time all the fishermen use small meshed nets, and the Board would either be obliged to stop this fishing, or the salmon fishing, during April and May, the time the shad are in the river.

(7.) That if a smaller mesh was allowed the lave net fishermen

would take large numbers of hake and coarse sea fish that now they cannot catch.

In reality these arguments resolve themselves into two :—

(1.) That a reduction in the size of the mesh of net would help to stop poaching.

(2.) That it would increase the revenue of the Board.

On the other side the following very cogent reasons exist :—

(1.) That if the mesh of net is reduced in the Severn it must be reduced in any other river that applies for it.

(2.) That the Wye Board had passed a byelaw increasing their mesh of net from 2 inches to 2¼, and that it would not do to have one mesh of net legal in one half of the river, and another in the other.

(3.) That a considerable number of fish that now escape would be taken if the mesh was reduced, and that the stock of salmon in the Severn was not sufficiently numerous to justify such a reduction, and therefore notwithstanding the great advantages that would certainly accrue to the Severn Board if the byelaw was passed, yet, upon grounds of general policy to the other rivers in the country, and in the interests of the Severn itself, I felt that it was my duty to recommend that the byelaw should not be allowed.

At my inquiry at Lydney most important evidence was given as to the immense injury the salmon basket-putchers were doing to the fisheries by killing "old fish," *i. e.*, fish returning to the sea as kelts after spawning. One witness said he had seen as many as 19 old fish taken out of putchers in the month of April.

Another witness stated that in March and April the average weight of kelts caught in the putchers was 20 tons. Putting each fish at 10 lbs. weight, this would give no less than 4,480 fish returning to the sea killed in two months, after they had safely survived all the poaching and obstacles of the Upper Waters.

It appears that the putchers that catch these kelts are those that fish on the ebb tide, and placed with their mouths upstream ; the fish descending with the tide get into the open mouth of the putcher, and in their exertions to get free only push themselves further down into the narrow end, where they become captives, and are dead before the fishermen can get to them.

It also came out in evidence that the present device for closing the putchers during the weekly close time is not effective, and that very frequently salmon are caught during the weekly close time.

It being certain that many kelts are killed annually by these putchers, it becomes a grave consideration as to what should be done for the future, as it is impossible to let matters remain as they are. I should propose, therefore, that the putchers should not, under any circumstances, be put in the river till the 1st of May. It is possible also that putts being set for shrimps and other fish destroy samlets also, but it is very difficult to get evidence of this fact.

THE BEAULIEU AND THE ITCHEN.

At the request of Lord Henry Scott I have examined a little river called the Beaulieu river. This river empties itself into the Solent a few miles to the south-west of Calshot Castle. The lower part of the river at Beaulieu is kept up by a weir consisting of five moveable hatches, the total width of them being 25 ft. In winter time the hatches are drawn. The hatches will lift with the flow and shut with the ebb of the tide, an arrangement made to drive the mill wheel connected with this weir. There are no salmon I fear in this river. It is principally a sea trout river; the fish average from about 3 lbs. to 4 lbs. I have examined the spawning ground which runs up into the New Forest, and is fed from waters draining from the forest. A considerable number of salmon peal are annually caught in July by netting the pool at Harford Bridge; as many as 20 peal have been caught at a haul. The stream above Harford Bridge is nearly all spawning ground, in places of the most favourable character. If these spawning grounds were raked over, and the weeds, mud, &c., removed from them about the time the floods begin to descend, and if a proper system of preservation during the winter months was instituted and kept up, this little Beaulieu river would soon become a very valuable salmon peal fishery.

There is also any oyster fishery in the estuary of the river, which with attention and scientific cultivation would greatly improve. There are also great facilities for restoring the ancient fish ponds connected with Beaulieu Abbey at this spot.

I commended the cultivation of the river, the oyster beds, and the fish ponds to the consideration of his Lordship, as such a combination of piscatorial advantages are seldom found united under such favourable circumstances; they should, therefore, be made the most of for the improvement of the property, and for the benefit of the public in general, especially the residents of Southampton. I may here renew the idea that I have long entertained that it would be exceedingly desirable to form a new district to be called the Itchen and Beaulieu district. Its western boundary would join on to that of the Avon (Hants). Salmon and sea trout are always found in more or less abundance in the Itchen, and it would be a great advantage to the Southampton and neighbouring markets, if the owners of these fisheries and the authorities at Southampton would take advantage of the protection the law affords to the fish indigenous to these rivers.

THE CANTERBURY STOUR.

The Canterbury Stour is 45 miles long; it rises from the chalk downs and empties itself into Pegwell Bay, to the south of Ramsgate. So far back as the times of Isaak Walton the Stour was celebrated for a large species of salmonidæ called the Fordwich trout, or hook-bill. Of this fish Isaak Walton writes:—"There is

" also in Kent, near Canterbury, a trout called there a Fordidge " trout, a trout that bears the name of the town where it is usually " caught, that is accounted the rarest of fish; many of them near " the bigness of a salmon, but known by their different colour, and " in their best season they cut very white; none of these have been " known to be caught with an angle, unless it were that one was " caught by Sir George Hastings, an excellent angler, and now " with God; and he hath told me, he thought that trout bit not for " hunger but for wantonness; and it is the rather to be believed, " because both he then and many others before him have been " curious to search into their bellies, what the food was by which " they lived; and have found out nothing by which they might " satisfy their curiosity."

The year 1874 is now the seventh year that this river has been cultivated in a most praiseworthy manner by the gentlemen forming the Stour Fishery Association and Board of Conservators, yet I regret to say the result, as regards the multiplication of migratory salmonidæ in the river, has not been satisfactory. That the public at large has benefited by their efforts, there can, I think, be no doubt, inasmuch as salmonidæ have been caught in Pegwell Bay and the neighbourhood, and sold in public markets at Ramsgate, Margate, &c. The principal reason why salmon have not been caught in the river is that the fixed engine at Fordwich cannot be worked, inasmuch as it has no certified pass. If a certified pass were placed in it the trap would immediately become useless.

I advised that this trap should be again set in 1875 for experimental purposes, and under proper supervision, but it was not done on account of bad weather and continuous floods. I understand that although migratory salmonidæ have not much increased, yet that the river trout indigenous to the stream have benefited greatly by the judicious management of Captain Lambert, the secretary to the association, and his colleagues. I was exceedingly pleased with Captain Lambert's system of artificial trout-breeding streams; it is very easy to hatch trout, but it is very difficult to rear them. Captain Lambert has portioned off a certain space of a natural spawning brook, and in this the fish have thriven and still thrive wonderfully; he has turned down some five or six thousand well grown yearlings, and has in 1875 hatched out some 15,000 trout ova at Chartham Mill.

The reason why the migratory salmonidæ do not ascend the river, I think may be explained by the presence of the terrible pollutions from the city of Canterbury, which fall into the stream at Fordwich. See page 57.

FISH OTHER THAN SALMON.

Section 39 of the Salmon Act, 1873, paragraph 11, reads as follows:—" To regulate during the annual and weekly close " seasons the use within any river of nets for fish other than

"salmon, when such use at such times is prejudicial to the "salmon fisheries; provided that nothing in this sub-section "contained shall authorise anything to be done which shall affect "any part of any river in which part there is a several right of "fishery, or any river or part of any river where the breadth at "low water is greater than six miles."

It will be observed that the word "regulate" is used in the above clause, not "prohibit," and this rather tends to complicate. Large numbers of sea fish resort to the mouths of salmon rivers and even go partially up the rivers themselves, for the purposes of spawning. Many of these afterwards, when adults, are sent to the large markets in England and Wales. The following is a table of the numbers of sea fish consumed in the London market; most of these resort to the estuaries of rivers to breed:—

	Number of fish.	Weight or measure of fish. lbs.
Soles, (averaging ¼ lb. each) - -	97,520,900	26,880,000
Whiting, (averaging 6 oz. each) -	17,920,000	6,720,000
Haddock, (averaging 2 lbs. each) -	2,470,000	5,040,000
Plaice, (averaging 1 lb. each) -	33,600,000	33,600,000
Sprats - - - -	—	4,000,000
Flounders, (7,200 quarterns, 36 fish per quartern) - - -	259,200	43,200
Dabs, (7,500 quarterns, 36 fish per quartern) - - -	270,000	48,750

I now proceed to report upon various inquiries I have made relative to fish other than salmon.

Estuary of Taw and Torridge.

In July last, I held an inquiry at Barnstaple, also at Bideford, relative to the expediency of passing a byelaw made by the conservators of the Taw and Torridge, "that after the "annual close season 1873–4, no nets for any fish other than "salmon shall be used during any future annual or weekly close "season having a mesh of less dimensions than 1½ inch from "knot to knot on each side of the scale or six inches round each "mesh when wet. Any person acting in contravention of this "byelaw shall be liable to a penalty for each offence of not less "than 5*l*." As the carrying out of this byelaw would seriously affect the interests of the fishermen, they attended the meeting in considerable numbers. The sea fish that come up into the river are flukes, mullet, bass, soles, &c. The meshes of some of these nets are so small that the little finger could not be passed through them. During the last few years the consequence of this has been that the supply of adult fish has very greatly fallen off. A fish dealer stated that he could not buy the small fry as he could not get rid of it, the size had decreased and the supply become less plentiful; the mesh, called the shilling mesh, because it just filled a shilling, was too small. These sea nets catch and destroy every-

thing that gets within them. Large numbers of "bret" which are possibly young herrings are also destroyed, and one witness stated that she had sold for a shilling, a basket holding two pecks of bass, not bigger than her finger. If the fry were spared there would be more fish and of a better quality. By the present mode of fishing both the quantity and quality of fish were greatly diminished. It was also stated that a great number of salmon pink was caught in these small mesh nets in May and June. The fishermen's opinion seemed to be that they should be allowed to fish with a net of 1½ inch mesh from knot to knot all the year round, and that they should fish for salmon from the end of May and October, so that they would only have one mesh of net for all kinds of fish, salmon included.

The evidence that I had, much as I would wish to preserve the sea fish, was not such, altogether, as to enable me to recommend the approval of the byelaw, inasmuch the alteration in the rules of the net might seriously affect the herring fisheries in the locality.

Morecambe Bay.

The foreshore along a great extent of the sands which form Morecombe Bay is during the annual close time thickly studded with nets, which catch flat fish, of which large quantities are sold in Ulverstone and the neighbourhood. These flat fish are locally known at Ulverstone by the names of sand fluke, plaice fluke, and sand scar fluke, and they are, what appeared to me to be the plaice, flounder, and dab (*Pleuronectes platessa, pleuronectes flesus*, and *Platessa limanda*).

As soon as the salmon fishery is over these nets, called "traps," are put in fishing order; the trap nets being somewhat smaller in form and action to a Scotch stake net, must of necessity do great injury to the salmon. These traps are about 6 feet high at the lowest arm of the net. There are also fluke nets used upon the sands; these are from 3 ft. to 3 ft. 6 ins. high. It is impossible to watch all these nets, and hence it is certain that a great number of salmon, especially sea trout, are annually destroyed in them, especially in the close season. A large box of unclean and unseasonable fish, caught probably in the neighbourhood of Ulverstone, was consigned to the market of a large manufacturing town. I took measures by telegraph to stop these fish, but received no answer from the authorities with whom I communicated. The next morning when inspecting the market at Liverpool, I was informed by Mr. Tyrrell, acting under Mr. Stonehouse the clerk of the fish market, that he had that morning seized and had then in his office samples of unclean salmon; it is more than probable that these were the same fish which I had attempted to stop, but which were sent on to Liverpool for greater security of sale.

The fish seized by Mr. Tyrrell were seven in number, five females and two males, all full of spawn, four were badly marked by the leister, and three marked with the net.

I understand both from Mr. Stonehouse and Mr. Tyrrell that some law should be enacted to regulate the sale of sea fish. Mr.

Stonehouse is of opinion that the sale of sea fish of certain descriptions between certain dates should be prohibited in all English markets.

Bridgwater Bay.

As regards the destruction of sea-fish fry in estuaries, I regret to say that the terrible slaughter of young sole, turbot, and fish of all kinds still continues in Bridgwater Bay. I was informed by Mr. Robinson, of Embdon, Bridgwater, that on March 23 he observed one of his men preparing to make a dinner on 34 soles and 5 flat fish, most of them about 3 inches in length, none being more than $4\frac{1}{2}$. This lot had been bought for 2*d.*; they were caught in the hose nets. The sum asked for a large pair of soles at Bridgwater is 3*s.* 6*d.* It is absolutely necessary that this destruction of sea-fish fry should be put a stop to in Bridgwater Bay, and I trust that in my next report that I shall be enabled to announce that it has been stopped.

Estuary of the Severn.

In the course of my inquiry at Lydney good evidence was given relative to the twait and shad fisheries in the Severn. The twait and shad very much resemble each other. Of the Allis shad, scadina, alewife, damen herring, shad, Clupea alosa, Alosa vulgaris, Couch says:—"The Severn has long possessed the cha- "racter of affording shads of a high degree of excellency, for "which a regular fishery is carried on, of so much value, that it "forms one-third, or, according to some evidence, an half of the "profit derived from the fish of all sorts that is there taken.

"The season is in April and May, and the improvement in "quality is quickly lost after the fish have entered the river, "where they are caught in nets, of the length of about 200 yards, "with a mesh of 3 inches, and from 70 to 80 dozen have been "caught in a night.

"It spawns in about the first half of June, and for this purpose "they do not proceed very high up the river, it being very un- "common to find them much above Worcester, the chosen situ- "ations being shallow and rocky, and the proceeding is con- "ducted at night, at which time the fish may be heard to make "a rattling noise, as if beating the warte with their tails.

"Presently, after this, the quality of the flesh suffers much "change, and they speedily leave the river for the sea. It is to "be observed, however, that I have found the roe of large size "in the first days of February, fully enlarged in April, and "also at the end of June.

"Of the twait, Couch states it is called maid, shad, Clupea alosa, "Clupea finta, Alosa finta.

"Cuvier established some definite marks of distinction; the "chief of which are the existence of some teeth in both jaws of "the twait, and that it is ornamented with a row of rather large "spots along the sides from the gill-covers; whereas in the allis "is only one spot and sometimes none."

From evidence given at Lydney it appears that the net used for catching twait and shad is an inch and a half from knot to knot. If a salmon is taken in this net it is illegal to keep it, and at the same time it is impossible to impose a license duty on a shad net.

The largest shad known by the Lydney fishermen are from four to seven pounds; the twait weigh from one to three pounds; The net now used is a $5\frac{1}{2}$ inch mesh, or an inch and three-eighths from knot to knot; the fishing lasts from the beginning of April to the 11th of June. The greater number of these fish are small. A pound twait would go through a 6 inch salmon net; it would be a great hardship to put a stop to the twait and shad fishery; the fish are sold to the poor people about the Forest of Dean at the price of from 2*s.* 6*d.* to 5*s.* per dozen of 13.

The average weight is 18 lbs. to 21 lbs. to the dozen fish. Twait have of late increased, the shad decreased; they are full of roe when they come up the Severn.

The twait and shad fishery in the estuary of the Severn should not be interfered with.

The Americans think much more of shad for the table than we do in England.

When the shad and twait get up to the fresh water they afford great sport for anglers, as they take a fly greedily, and are a very game fish.

When the twait and shad are coming up, there are generally, I understand, few salmon about. The sturgeon in the Severn estuary are said by the fishermen to chase and disturb the salmon, but I do not think this likely; at all events, from the mouths of the sturgeons being toothless, and suctorial, the salmon could not be devoured by them as has been erroneously stated. Five sturgeon were caught in one week at Newnham.

Porpoises are also said to drive away the salmon, and if a shoal of porpoises get into the narrow part of the Severn, near Newnham, no salmon will ascend the river until the porpoises disappear.

Eels.

New regulations as regards the catching of eels were made by clause 15, Act 1873, viz., "No person between the 1st day of January and the 24th day of June, inclusive, shall hang, fix, or use in any salmon river any baskets, nets, traps, or devices for catching eels or the fry of eels, or place in any inland water any device whatsoever to catch or obstruct any fish descending the stream; or shall at any time place upon the apron of any weir any basket, trap, or device for taking fish, except wheels or leaps for taking lamperns, between the 1st day of August and the 1st day of March; and any person acting in contravention of this section shall incur a penalty not exceeding 2*l.* for every day during which he suffers such engines to be fixed or used as aforesaid. But nothing herein contained shall extend to prohibit the use of eel baskets not exceeding in any part 10 inches in diameter, constructed so as to be fished with bait, and not used at any dam or weir."

That the preservation of eels is a very important public question as pertaining to the increase of the food of the people, especially of the poorer classes, is evident from the fact that a very large number of eels are sold as stewed eels and eel pies throughout the metropolis; stewed eels served to the labourers, cabmen, &c., are most highly appreciated. I learn from a good authority, "London Labour and London Poor, 1864," that the following quantities of eels were sold in Billingsgate Market in the course of that year:—

	Number of Fish.	Weight or Measure of Fish, lbs.
Eels from Holland, „ England & Ireland. (6 fish per lb.)	9,797,760	1,505,280

Equal to 730 tons, value 26,800*l.*

Thus it will be seen that London alone consumes nearly ten millions of eels. From personal experience I have ascertained that at the stewed eel shops a very small proportion of eels is given for a penny, the rest of the dish being made up of melted butter and parsley. When we come to consider that our large manufacturing towns, especially in the Black Country, thickly populated by colliers, also consume eels, the necessity for their preservation by Act of Parliament becomes obvious. The clause in the Act therefore above quoted promises, in course of time, greatly to increase the supply of eels to the public.

Eels are found more or less abundantly in all the estuaries of England and Wales, but the Bristol Channel estuary is an especial favourite with them. They descend from the Severn, the Wye, the Usk, on the north side, and the Avon, Brue, Parret, and other small rivers in Somerset on the south side. The elvers or young eels ascend these rivers in the spring months, having been hatched out in the estuaries from eggs deposited from the parent fish which descended in October and November. As I stated in my last report, these elvers were formerly destroyed in millions in all these rivers, parboiled, and sold in round cakes. The poor people on the Severn used to make sad havoc among them, and they consider it a privilege to be allowed to catch them. The Severn Board of Conservators, most properly acting up to their duty, determined to carry out the protective clause in the Act. Last spring they therefore summoned two persons for killing elvers, or the fry of eels. So long ago as the reign of King Charles the Second the importance of the preservation o the fry of eels was acknowledged; there was a prohibition against "the use of any net, engine, instrument, or device whatever for the taking the fry of eels commonly called elvers."

Another Act passed in the 18th year of the reign of George the Third allowed for use but not for sale the taking in the Severn of elvers, the brood of eels. The defence instituted in the Gloucester case was that elvers were not the fry of eels. I had the honour of giving evidence in this first and therefore most important prosecution, and having made many careful dissections, I proved to the satisfaction of the magistrates that the

structure of elvers was so similar to that of the parent eels that their true nature could not for a moment be doubted. A conviction therefore was obtained, which I trust will have the effect of prohibiting the capture of elvers for the future.

I find there are 90 elvers to the ounce, there are therefore 1,440 elvers to a pound. The table quoted above gives six eels to one pound, therefore an ounce of elvers allowed to grow would produce 15 pounds weight of fish; considering they have been destroyed for years past by the cartload, tons and tons of good food have been lost to the people. It is not known how long these elvers require to become full-grown eels, at all events when they do return from the river to the sea they are caught in very large numbers.

I have examined in the neighbourhood of Gloucester some immense eel nets used in the autumn time.

At a meeting of the Severn Board of Conservators held at the Guildhall, Worcester, on the 24th November 1874 (Lord Northwick in the chair), the following byelaw was proposed:—

"That fixed nets for catching eels in the annual close season when used in any parts of the river Severn or its tributaries below Diglis Weir, or within 300 yards below any other weir in the district, shall be fenced by linnet or circle of netting, having a mesh of not more than two inches from knot to knot, or eight inches round, stretched tightly across the cod of the net."

The evidence produced in support of this byelaw was by no means satisfactory, particularly as regards the eel nets being injurious to salmon. The eel nets used at and about Gloucester are a very great size. At the mouth the meshes are about two inches square, but at once begin to decrease, and at the point are so small that a minnow could not go through them. To make the net fish properly wooden hoops are introduced at intervals so as to keep the sides out, and a series of purses like mouse-traps are placed in the tail. The eels once within these traps cannot escape. The eels caught in this manner are sent off to Birmingham and the Black Country. The effect of passing the above byelaw would probably be to interfere considerably with this industry. It is of considerable local as well as general importance. I asked at the meeting at Worcester how many eel nets would be affected if the byelaw was passed, and was informed that the number of nets thus affected would be between 50 and 70. Under these circumstances I stated that in my opinion it was not advisable to ask for its confirmation, and if it was sent up for approval it could not certainly become law without an official inquiry.

EARLY AND LATE RIVERS.

When considering the salmon rivers of England and Wales as a whole I determined if possible to find some general law as to why some of them are naturally early while others on the contrary are naturally late, I therefore mapped out on an ordnance map the catchment basins of all our best salmon rivers, and I fancy that by the continuous study of the matter I have arrived at something like nature's definite law of this important matter.

The rule seems to be (with few exceptions):—

1st. That the earliness or lateness of a river depends upon its proportion of mileage in length to its square mileage of catchment basin.

2nd. That if a river has a long length of course and small catchment basin it will be late.

3rd. If a river has a short course and a large catchment basin it will be undoubtedly early.

In order to test this matter by the above rules I gave my private secretary, Mr. Searle, who knows none of the rivers from having examined them, a list of our salmon fishery Districts, and requested him to tell me, by the application of my rule, which were early and which were late rivers. After working at it for some time Mr. Searle, to my astonishment, produced the following table, without any prompting from me or consulting books. The result of this was really astonishing to myself, as it doubtless will be to all interested in the question:—

Name of River.	Miles in Length.	Square miles of Catchment Basin.	Proportion of Catchment Basin to River.	Very Late.	Late.	Medium.	Early.	Very Early
Avon and Stour	67	1,145	—	—	—	—	—	Avon.
Axe	25½	155	6 to 1	—	Axe.	—	—	—
Camel	28½	155	5 to 1	Camel.	—	—	—	—
Cleddy	44	202	5 to 1	Cleddy.	—	—	—	—
Clwyd and Elwy	63½	306	4 to 1	Elwy.	—	—	—	—
Conway	30½	224	7 to 1	—	Conway.	—	—	—
Coquet	45	213	5 to 1	Coquet.	—	—	—	—
Dart	56½	179	3 to 1	Dart.	—	—	—	—
Dee	106½	850	8 to 1	—	—	Dee.	—	—
Derwent	35½	263	7 to 1	—	Derwent.	—	—	—
Dovey	35	264	7 to 1	—	Dovey.	—	—	—
Eden	70½	916	13 to 1	—	—	—	Eden.	—
Exe	58½	562	9 to 1	—	—	Exe.	—	—
Fowey	27	116	4 to 1	Fowey.	—	—	—	—
Frome	34	206	6 to 1	—	Frome.	—	—	—
Kent	28½	196	7 to 1	—	Kent.	—	—	—
Lune	53½	434	8 to 1	—	—	Lune.	—	—
Otter	27	95	4 to 1	Otter.	—	—	—	—
Rother	33½	281	8 to 1	—	—	Rother.	—	—
Ribble	61	501	8 to 1	—	—	Ribble.	—	—
Rhymney	35½	99	3 to 1	Rhymney.	—	—	—	—
Seiont	14½	36	2 to 1	Seiont.	—	—	—	—
Severn	178	4,437	25 to 1	—	—	—	—	Severn.
Stour (Canterbury).	—	—	—	—	—	—	—	—
Tamar and Plym	70½	454	6 to 1	—	Tamar and Plym.	—	—	—
Taw and Torridge	79½	459	6 to 1	—	Taw and Torridge.	—	—	—
Tees	95	744	8 to 1	—	—	Tees.	—	—
Teifi and Ayron	128½	738	6 to 1	—	Tiefi and Ayron.	—	—	—
Teign	34½	189	6 to 1	—	Teign.	—	—	—
Towy	66½	522	8 to 1	—	—	Towy.	—	—
Trent	167½	3,543	21 to 1	—	—	—	—	Trent.
Tyne	73	1,053	14 to 1	—	—	—	Tyne.	—
Usk	76½	650	8 to 1	—	—	Usk.	—	—
Wharfe, &c.	429½	429	1 to 1	Wharfe, &c.	—	—	—	—
Wye	148	1,625	10 to 1	—	—	Wye.	—	—
Tay	105	2,510	24 to 1	—	—	—	—	Tay.
Rhine	800	86,000	107 to 1	—	—	—	—	Rhine should be particularly early.

Rivers with less than 5 miles (square) of catchment basin to 1 mile of river are - Very Late.
" " 7 " " " 1 " - Late.
" " 8 to 10 " " " 1 " - Medium.
" " 10 and above " " " 1 " - Early.
" " 20 " " " 1 " - Very Early.

Thus it appears that rivers with less than five square miles of catchment basin to one mile of river are very late. That rivers with less than seven miles to one mile of river are late. Rivers with from 8 to 10 miles are medium. Rivers with from 10 to 15 miles are early. Rivers from 20 miles and above are very early.

In order to test this further I requested my secretary to tell me whether the Tay and Rhine should be early or late, and the following was his report:—"The Tay, 105 miles of river to 2,510 "square miles of catchment basin, *i.e.*, 24 to 1, should be very "early, and the Rhine, 800 miles of river to 86,000 square miles "of catchment basin, *i.e.*, 107 to 1, should be particularly early." This is clearly proved in the last case, as the fresh run Rhine salmon come into the London market in the beginning of November, the fish then taken being identically the same class as those caught in England when our spring fishing commences.

POLLUTIONS.

It is generally agreed that the pollution of rivers is a far too important point to be considered entirely from a salmon culture point of view. It has been left rather to be considered both in England, Wales, and Scotland as a question of public health. It has of late years been proved by the profession to which I have the honour to belong that water is capable of disseminating the germs of disease in a most insidious and in a hitherto unsuspected manner. The question of pollutions comes home to every individual. He may care nothing for fish or fisheries, but he probably cares somewhat for the health of himself and family. As long as rivers are polluted it is well within the limits of possibility that in the simple glass of cold water from the jug on the dinner table the individual who drinks it may be at the same time introducing into his system the germs of minute decomposed organic matter, or even if nothing is visible to the eye or microscope, the water may be saturated with gases, imperceptible to the taste or smell, resulting from sewage or other foul substances.

These circumstances, therefore, especially in the summer and autumn, forewarn every householder that he is directly interested in the sewage question. Having, as in former years, taken every opportunity of examining the outfalls of sewers into our rivers, I am in a position to warn the authorities who have command of these sewers that the enemy is among them, and only waits time and opportunity to spring from his lair in the form of wide-spread disease. I hear on all sides public bodies stating that they are waiting for plans, that is, they hesitate to accept a plan which does not show that the sewage can be properly utilized. It is not a question of whether sewage can or cannot be turned into an article of commerce. What must be done is at any rate to keep the rivers clean, and not utilize them as public sewers. I do not intend to describe an infallible remedy for this; but of one thing I am from personal observation quite sure, that it would not be at

all impossible or expensive to keep the solids out of the river. By this plan no alteration in the present system of drainage of towns would be necessary. All we require is to place either a moving or stationary self-acting grating at the mouth of each sewer, so arranged that it would pick up on its arms the worst part of the sewage, which under the present happy-go-lucky system is allowed to flow into the river, till at last, gradually from its own weight, it forms a bank of fœtid mud. It is probably not generally known to the public the reason why these banks of fœtid mud are not more pernicious than they are. Below the exit of the sewer at Canterbury, which joins the Stour at Fordwich, the bed of the river is a mud bank instead of pure gravel. Having taken samples of this mud home I found that, by a wonderful balancing power of nature, which ordains that nothing in sewage should be lost, when it had settled, this mud bank was the habitation of thousands of living creatures of three or four different species, whose food consisted of the (to us, invisible) portions of putrid animal and vegetable matter, which they, by converting them to their own uses, prevented from increasing to such an extent as to become directly injurious to human health.

This same admirable provision of nature may be observed in nearly all stagnant waters. The domestic rain-water butt and the horse pond are familiar examples. This marvellous phenomenon of nature assisting us to dispose of our sewage should be observed by all, as all are really interested in the matter.

The pollutions of the Stour at Canterbury, may be considered a typical case of a river grievously injured by sewage. This is especially to be seen at a point where an unpolluted stream joins that which flows from the city of Canterbury, and receives also the drainage of the barracks. The water running down the unpolluted stream is as clear and bright as any chalk water in the world. The bed of the river which is polluted, on the contrary, is thickly covered with a remarkable fungus-like growth, not at all unlike in appearance the black fungus which is found adhering to the roofs of wine cellars. Wading into this I found that there were many feet of thick black mud upon the natural gravel beds, and at every step huge bubbles of fœtid gas rose to the surface. Below the sewer at Fordwich there is an enormous bank of this fœtid mud.

The sewage coming from the barracks is passed through a kind of filtering apparatus. By the side of this catch pit I observed a large heap of deposit which had been taken out. Upon it, although in December, were growing, in most luxuriant manner, various kinds of vegetables. This heap is in Mr. Kenmont's nursery grounds, and I was informed by his foreman that the contents of the catch pits were used largely in the nursery grounds.

One part of the deposit is mixed with three parts of earth, and all the trees and shrubs flourish on this amazingly. It was stated that the herbage growing on the deposit heap would not be eaten

by animals. I therefore tested it with a horse. By the greedy way in which the animal devoured it, it is evident that grass grown upon the débris of sewage would be very acceptable to grass-eating animals.

Here, then, we have, I think, some light thrown upon the difficult question of town sewage, for in the Canterbury Stour case we have direct evidence that sewage deposit from towns is a good manure. I had the sewage tested at Canterbury by a chemist, and ammonia in large quantities was thrown down from all the samples.

Here, then, we have a wanton waste going on, and I strongly urge the Canterbury authorities to put catch pits to the mouth of the sewer at Fordwich, or else to catch the solids as they flow into the river by means of sieves, &c., as I have elsewhere described.

Hops are grown largely in the neighbourhood of Canterbury. Why should not the sewage material be used for the hops? I should be exceedingly obliged if any hop grower would be good enough to try this experiment. If successful it may lead to the utilisation of the Canterbury sewage, and consequently the prevention of the further pollution of this naturally pure river.

It is my rule in dealing with inanimate objects to ascertain from experiment what they (so to speak) wish to do. I have found by experiment that sewage, even of the most turbid and noxious character, will, if allowed to remain stagnant, immediately begin to let drop to the bottom, without human aid, the organic matters held in mechanical suspension in it. Here, then, we have a foundation stone for our future proceedings, but the difficulty is the quantity of water. By the system first brought to notice by Mr. Menzies, deputy surveyor of Windsor Park, we have a dominable quantity of water to operate upon. By his plan, in short, the clean water from the skies goes from the tops of the houses and the streets into the river, whereas the water used for sewage purposes goes not into the river at all, but is kept separate, so as to be comparatively easily treated by the mechanical and chemical skill of men. While engineers therefore are pondering and in hesitation what to do, I beg their pardon if I might suggest that they might do something, and that something is to keep out the solids from the river. This may be done, firstly, by a system of sieves or platforms of variously meshed wire placed at the mouth of the sewer, or secondly, by allowing the water a little time to deposit the matters which it is carrying with it, not in the bed of the river, but in appropriate catchpits made for the purpose. It should be recollected that the most expensive means are not always the most efficacious, and that also the question of keeping sewage out of rivers is not to be a question of profit, but of necessity for the public good. Could the sewage of towns and mines be kept out of our rivers and the tributaries thereof, two things would most assuredly happen, viz., first, the public health would not be injured as at present, while at the same time the

price of salmon would be decreased. Civilization and intelligence have now so far advanced that the public will not allow the pollution of rivers to continue much longer. I trust, therefore, that Parliament will soon make it compulsory that the public have pure water for the use of themselves, wives, and families, and at the same time an increased supply of salmon at prices within the reach even of the poorest.

In concluding my report upon pollutions I beg leave to call the attention of those concerned in the impurity of water to an admirable and simple apparatus for detecting the impurities in the water. This apparatus consists of 10 small stoppered bottles and test tubes in a neat portable case. By means of it, at the river side or on the study table, can be detected in a very short time, by positive and negative tests, the presence of ammonia, organic matter, lead, carbonate of lime, sulphate of lime, sulphuric acid, and iron. This apparatus has been brought out by the London Water Purifying Company, 157, Strand. Price, 10*s.* or a guinea, according to size required, including a book with instructions for use.

Having experimented considerably on a small scale with pollutions of various kinds, I wish in this place to put on record the fact that water, when heated up to the exact boiling point and poured immediately upon any decomposing animal matter, annihilates almost immediately any deleterious gases arising therefrom. This will be found very useful for house drains, &c.

As regards pools, &c., where no injury is expected to arise to fish, the use of copperas or sulphate of iron will be found very advantageous; it is largely used by Mr. Bartlett, resident superintendent of the Zoological Gardens, who finds it very useful in keeping clear the tanks for the hippopotami. The mode of using it is as follows:—Take sulphate of iron (to be bought of the dry-salters) one pailful to be dissolved in three pails of water. This is enough to cleanse a pond 30 feet square, and from 5 to 10 feet deep.

Mine Pollutions.

It is certain that catch pits, properly arranged and worked, will, to a very considerable extent, keep back the mud made of the crushed rock from which the lead ore has been extracted. These catch pits soon get filled up, and labour to clean them out costs money. If, however, this powdered rock could in any way be applied to commercial purposes, the owners of lead mines would of their own accord clean out the pits. I have therefore submitted a sample of mud, taken from the catch pits of the Van mines, to Mr. Allen, builder, of Stanhope Street, Regent's Park. He has sent this sample to the brickmaker, who reports that the specific gravity of lead mine refuse is much above that of clay used for making ordinary bricks, and he considers that if properly tem-

pered and furnaced that it would be possible to make, from this lead mud, firebricks, the value of which is double that of ordinary bricks. The best Stourbridge bricks are worth 4*l.* per 1,000.

In the month of June it was reported to me that a sudden and mysterious mortality had taken place among the salmon in the Wye. The fish were seen floating dead up and down with the tide, and lying dead upon the mud.

At first I thought that the sheep-washing might have been the cause of the death of these fish, but this turned out not to be the case. It appears that between March and June there had been no considerable fresh in the Wye, and during this long period of drought, which has not happened for many years past, the mud and sewage coming down the river settled at and about the old weir by Tintern Abbey. Mud was also deposited from the tides coming up from the sea. When the fresh came the salmon were destroyed by the descent of accumulated rubbish from the upper waters, added to that already collected in the lower part of the river, and stirred up by the fresh and the tide. The tide itself also must have added to the mischief, as I ascertained that the water running under Chepstow Bridge was of the temperature of 69°. The salmon in all rivers having large tracts of sands to oppose them in the estuaries are liable to injury by water of too high a temperature. The sand is exposed to the rays of the sun, the heat is then absorbed by the water, and I believe the water being so warm was the cause of the death of so many salmon in the Solway a few years back.

PRACTICAL CULTIVATION OF SALMON RIVERS.

Salmon culture has as yet by no means reached its maximum of development as to many practical details. There are many points to which the attention of conservators and water bailiffs might be very profitably directed by the river side rather than in the consultation room of the Board. Every salmon river should be looked upon as a gigantic aquarium, and every conservator and water bailiff should consider himself deputed by the public to give every possible facility for the salmon, especially in the breeding season. As the huntsman during the summer time is continually engaged in inspecting every cover, hedgerow, furze brake, &c. where his foxes will lay up, or have laid up their cubs, and as the gamekeeper carefully rears his pheasants, so it is incumbent on the Board of Conservators and their officers diligently to observe, record, and cultivate the spawning capabilities of every brook and rivulet within their district where the salmon are likely to breed.

In my inspections I very often have had occasion to point out improvements connected with the beds of spawning streams, which, if carried into effect, would very much facilitate the

deposition of the salmon ova, the rearing of the fry, and the protection of the fry from their enemies as they grow up into smolts. Such operations do not require the skill of an engineer, nor the expenditure of much labour or money.

I allude especially to the shifting of stones in the beds of rivers. The shifting of the stones should be done in such a manner as to turn all superfluous stones from off the gravelbeds in which the fish delight to deposit their ova. The stones thus removed should be piled up in the form of a small weir below. A hollow would thus be formed for the reception of the ova as deposited by the parent. By this means, also, the delicate fry would not be, as is now often the case, left high and dry in the drought of summer. Whenever practicable, beds of spawning streams might be harrowed or raked so as to loosen the soil and induce the fish to take to them. It would also not be difficult work to pile up big stones here and there near spawning beds frequented by fish, so as to afford protection for the parent fish under which they could retire during the intervals of spawning. Old trees, wrecks, &c. might also be advantageously used for this purpose.

I have more than once noticed that one single stone which happens to lie across a gap, or rests idle in what would otherwise be a pool at the base of a weir, has stopped or greatly hindered every fish ascending that river. Just as sheep will go one after the other through a gap in the hedge, so salmon, being gregarious animals, and not unlike sheep in many of their habits, will one after the other attempt to make their way through the same place, and what would be a help to one would be a help to all who follow. As an example of what good might be done in an hour or so by a single man working with a crowbar, I would mention as a special instance the filling up of a pool with useless stones at the foot of a fairly good pass at the Kilbury Mill, on the Dart. A little cement or puddled clay used in dry weather would also greatly assist in the formation of pools and the binding of loose stones together. The general maxim to be recollected in thus altering the stones is that the removal of stones creates pools, and the deeper the pool at the point where the fish wishes to make his jump the more likelihood there is of his overcoming the obstacle, inasmuch as he is thus enabled to take a much greater spring.

Another point also requires careful watching. After the parent fish have left their eggs in the gravel they gradually develop into life, and in the spring of the year I have turned up many small fish in the gravel about the size of and not very unlike barley-sugar drops in appearance. At this time the ducks become most formidable enemies, and a single duck would in a few minutes clear out of a salmon's nest every single infant fish. Six or eight ducks let loose in a spawning stream would thus in a few days clear off an immense number of fry, and do proportionate harm to the general stock of fish in the river. Water bailiffs should therefore be instructed, whenever they see

a salmon nest in the gravel, to place over it either a hurdle kept in position by stones, or a bunch of brushwood moored by a stone above. After the eggs are once deposited in the gravel no danger is to be apprehended by men, but great danger may be and is to be feared from ducks, whose bills are especially formed for robbing salmon's nests of their contents. The best plan, of course, where practicable, would be to have the ducks shut up altogether when the water becomes low enough for them to get at the salmon nests with their ovivorous bills. This plan should be especially put in force in trout and sea-trout streams, such as those in Hampshire, for a duck will eat trout as well as salmon eggs. If any angler residing at or near the bank of a trout stream wishes to insure good sport during the ensuing summer, he will take my advice and keep a sharp look-out upon the ducks during the period the eggs or fry of young salmonidæ are still buried in the ground.

One of the first consequences of weirs in salmon rivers is to pond up the water above them, and so convert what is naturally a salmon running stream into stagnant water. This immediately forms a habitat suitable for pike, perch, &c. Without question pike make great havoc among the parr and smolts. I would not, however, by any means advise that pike should be destroyed in rivers not suitable for salmon. They may be there properly cultivated. In salmon rivers, on the contrary, pike should be regarded as wolves when the lambs are about.

The simplest way to get rid of pike in a salmon river is to shoot them when they are spawning in the ditches in spring and early summer. A pike will carry an enormous quantity of eggs, for I find that a 32 lbs. pike carries 595,000 eggs, and a salmon of the like weight carries only about 30,000 eggs.

Thus it will be seen how very much more prolific the pike is than the salmon. Pike, moreover, have fewer natural enemies than the salmon.

Cases have come under my knowledge where poachers have waited and watched a certain spawning bed until a sufficient number of fish have collected on it to make it worth their while to assemble in a gang and clear the lot off the bed; the loss to the river by thus having a considerable number, say from five to thirty of the very best breeding stock taken simultaneously off the beds, must be exceedingly great. In cases like this I advise that Boards of Conservators should take means to deprive the poachers of their illegal capture, and at the same time not allow the eggs, which would otherwise be taken away inside the fish themselves, to be lost to the river. The spawning fish should be netted out under superintendence, and the eggs properly impregnated. These eggs should then be hatched out artificially. A brook suitable for the purpose should be chosen; boxes of the most common and rough description, such as egg boxes, should then be fastened into the brook, or sunk with stones, in such a

manner that there should be never less than six inches water flowing over them. The water could be admitted into the boxes through sheets of perforated zinc, and stakes should be driven into the bed of the stream immediately above the box, so as to keep off wreck and weed.

When the fish are hatched out and the umbilical bag is absorbed they should be collected, and either put back into the place chosen by their parents for them, or else they should be distributed throughout the upper brooks in shallow water in numbers from five to twenty in a lot. These small fry will carry very well in tin cans, and they can be easily caught and placed in the river by means of a little net some two or three inches square, and made of gauze. As these fry are turned out retreats should be made for them of stones in the bed of the river; in these they will make their home, and have an easy retreat from their enemies.

Some might say that it is better to leave the fish alone on the spawning beds, and let them conduct their operations in their own way, while a watcher is set to see that they are not disturbed. This plan is certainly the correct one in places where it can be carried out in a satisfactory manner; but there are many spawning streams far distant, and in wild upland desolate places, over which it would be impossible to put a perpetual sentry on guard. It is in such cases as this that I advise the above plan, of taking the ova and hatching them artificially, to be carried out. If the proper time is chosen, and the operations superintended by a responsible officer of the Board, I feel convinced that the river would be benefited. With judicious management several hundred thousand salmon eggs might be taken in the course of a day's work, and if properly treated 70 per cent. at least ought to grow to the size of fry fit to be turned out. The spawned kelts should of course in all instances be placed in safe places, such as in pools, or under bushes, &c. When the poachers come to make their usual raid on the spawning bed they would catch nothing, for the simple reason there was nothing to catch. In all cases spawning beds should be properly staked; nothing rolls up a poacher's net so effectually as old iron hooping, cut into convenient lengths. Gooseberry and thorn bushes, and boards or oyster barrels judiciously armoured with tenter hooks, or old reaping hooks placed in the stream, are good things to stop the operation of the poacher's net.

When the smolts and kelts are descending to the sea in the spring of the year, the water bailiffs should be instructed to pay special attention to the intake of mill leats. Unable to descend over the weir, the fry and kelts instinctively follow the stream, and stand a good chance of being injured by the mill wheel.

In order to obviate this misfortune a galvanised wire netting should be procured and fixed at an angle in front of the leat in such a manner so as to give the miller no cause to complain that

his water supply is the least interfered with. If wire netting cannot be procured, any small meshed net may be pressed into service. It should of course be leaded at the bottom. The person in charge should also mark the spot to which the smolts naturally descend in order to get over the weir. At this point it is generally possible to shift a stone, or otherwise make a passage, of from a foot to two feet in width. Prompted by instinct the smolts would very soon find this out, and would most assuredly take advantage of it. See Diagram No. 1., p. 68.

As regards kelts, whenever the mill is not at work, the waste hatch connected with the weir should be left open as wide as possible. This should especially be done. The man having opened the hatch should in all instances stand away from it, or the fish frightened by his presence would not take it.

Should the smolts and kelts be thus facilitated in their downward passage to the sea, much valuable time will be saved inasmuch as the smolts will begin to grow into grilse, and the kelts to become mended at a much earlier period than they would when detained by the weirs in fresh water. The practical consequence of the passing downwards of fry and kelts is of the greatest importance to the general fisheries, because the earlier the fish are let down the river to the sea, the earlier they will return grown to a size fit for the net or the rod. If detained, say a month or six weeks, by a weir, kelts become weakened and emaciated, the period of their convalescence in the sea is retarded, and they do not return to the upper waters until *after* the netting season is over; whereas, if they reach the sea at the proper time dictated to them by nature, they would lay up their fat and recover their condition in time to return to the river *before* the nets were off.*

Another reason why the smolts and kelts should be let down early, is that they most certainly feed upon the fry of sea fish, which in the spring of the year are hatched out in the estuaries in millions. If they arrive a month or six weeks behind their time the sea fish fry have either left or else have grown too large, therefore a late arrival in the sea means also short commons; this is especially applicable to the small fry; the large fish, however, feed principally upon big worms, shrimps, and the fry of fish of a miscellaneous kind ordinarily known as whitebait.

It occasionally happens both in Scotch and English rivers that grilse in certain seasons are very scarce. I have long thought over this most difficult question. The only solution that I can suggest is that, on account of scarcity of food or some other physical cause, the smolts descending to the sea, say in June 1870, do not come back to the river as grilse in 1870 at all, but that they remain in the

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* Some salmon-culturists hold that the presence of weirs in a river makes it late. The facts as above stated are very important in considering this subject.

sea until the spring or summer of 1871, and that they then return as small salmon. I fancy this to be more often the case than is generally suspected, for it seems contrary to the general law of the multiplication of animals that a smolt should descend from the river to the sea and come back in a few months as a breeding fish. The rule of the multiplication of salmon is that the larger fish breed best, and I know from experience that the finer the parents the finer are the fry. Again, the clean fish, that run up rivers during the months of November, December, January, and February, are in my opinion simply kelts that have remained in the sea much longer than is generally supposed; thus a kelt going down in January 1870 might return as a spawning fish in December 1870, and a kelt going down in March 1870 would return as a clean run fish in February or March 1871 or even 1872. The above remarks are the result of very careful dissections and examinations of salmon at all times of the year, and I would therefore strongly urge the Boards to take every possible opportunity of marking the descending kelts; a cut with scissors, or a hole punched in the adiposè fin, is a better mode of marking than placing any foreign body, such as a piece of wire or a label, on to any part of the fish.*

We are sadly deficient in knowledge as to the causes of what is ordinarily called the "run of fish;" but that, in this respect, fish (like all other migratory animals) obey some well-defined law of nature, there can, I think, be no doubt; what these laws may be we should, I think, endeavour to ascertain by actual observation. For this reason I therefore recommend that at as many fishing stations as possible a post should be fixed into the river, marked out in figures, so as to get as good a record as possible of the rise and fall of the river; observations also should be especially kept of the temperature and specific gravity of the water and of all the natural conditions, such as the barometer; also of the time when a good catch of fish is obtained, and the times when the fish are not on the run. These observations would be inexpensive, and would be of great service to net fishermen, for by careful and repeated observations it is more than probable that we should get some idea of the reasons why salmon run at some times and not at others. Thus labour and expense might be saved by not sending the nets and boats out to fish when the conditions were (as ascertained by previous observation) unfavourable for the fish moving.

The above observations may appear as a small matter to some—I trust few; but as a practical breeder and rearer of salmonidæ

* Mr. Mostyn Owen tells me that a salmon was once caught in the Chester Dee bearing a mark. From this and reference to books it appears that the fish weighed 7 or 8 lbs. when marked. He had been loose seven years and in this time had grown to 26 lbs. in weight. Of course it was not known how many times he had been up and down the river.

for many years past, I consider the measures I have suggested to be of the utmost importance for the increase of the general supply of salmon. Now that the Act of 1873 has been wisely drawn up, in conformity with the natural habits of the salmon, our attention should be devoted to assist in the multiplication of this mysterious, but yet, in a commercial sense, most important fish. To carry out the measures I now suggest, requires not so much the enactments of the law, as quick and careful out-of-door observation, followed by judicious action on the part of all individuals whose duty it is to cultivate salmon rivers

RETURNS OF SALMON SOLD IN BILLINGSGATE.

Messrs. William Forbes Stuart and Co., of Lower Thames Street, have again been kind enough to fill up the returns of salmon sold at Billingsgate from 1865 to 1874.

Year.	Scotch.	Irish.	English and Welsh.	Dutch.	Sweden and Norway.	Total Boxes.	Total Weight.	Value.
							Tons.	£
1865 - -	19,009	6,358	868	1,479	1,069	29,283	1,464	190,296
1866 - -	21,725	9,326	1,563	1,772	1,632	36,018	1,801	218,521
1867 - -	23,006	5,411	2,405	1,208	1,296	33,321	1,666	213,803
1868 - -	28,020	3,487	1,725	807	407	34,446	1,722	233,084
1869 - -	20,474	8,800	1,843	637	696	32,450	1,622	227,150
1870 - -	20,648	9,211	3,120	626	852	34,457	1,722	213,059
1871 - -	23,390	7,379	2,953	516	1,037	35,275	1,764	217,854
1872 - -	24,404	5,208	1,330	952	1,316	33,300	1,665	—
1873 - -	30,181	8,995	1,471	1,165	811	42,623	2,131	—
1874 - -	32,180*	6,041	1,602	1,491	652	41,966	2,098	—

* Including Berwick-on-Tweed, 1,124 boxes. Average weight of each box, 112 lbs.

The above figures for 1874 show a slight increase, about 9 per cent., over those for 1873, in the number of English and Welsh salmon, although there is a decrease in the total number of salmon from all sources sold at Billinsgate.

DIAGRAMS OF SALMON PASSES.

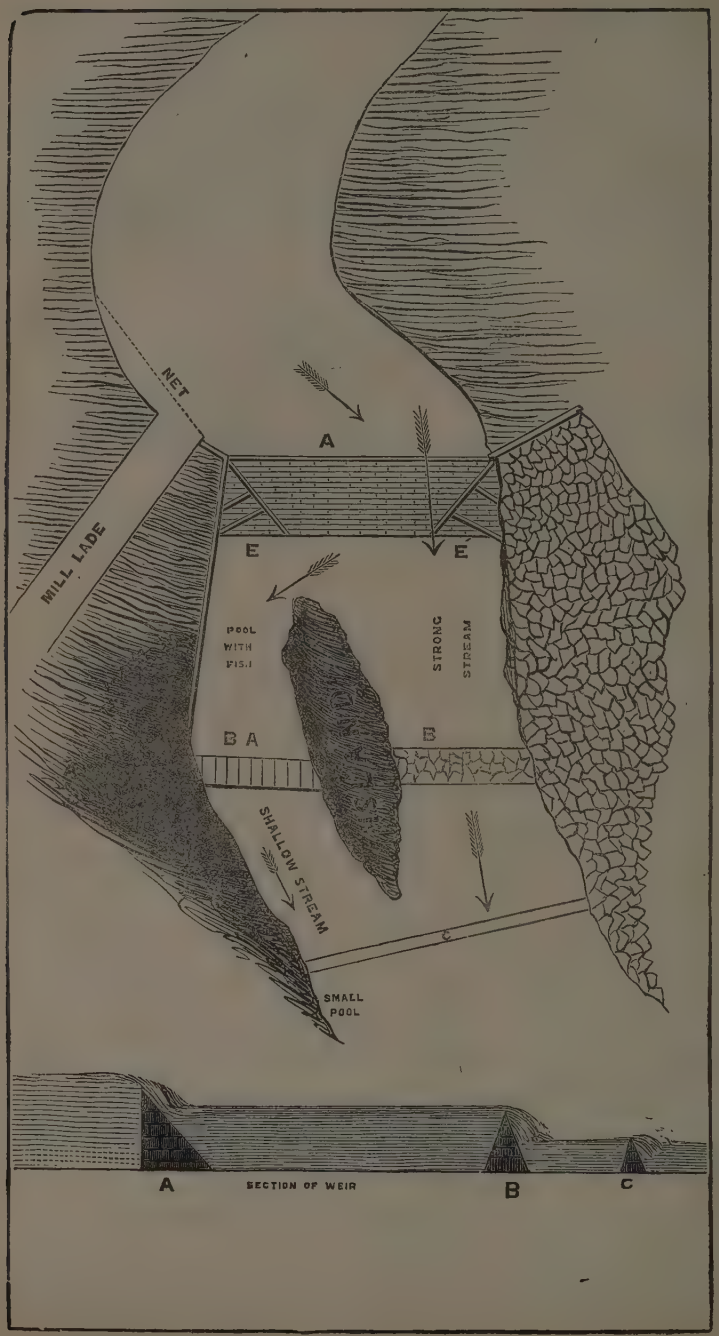
In my museum of Economic fish culture at South Kensington, I have now almost a complete set of models of salmon ladders.

I frequently take some of these on my inspections with me, to show to gentlemen who are about to build salmon passes, in order to give as much information as I can on the subject. I have this year thought it would be convenient for Boards of Conservators and the public to have, for ready reference, plans of various kinds of salmon passes which to my knowledge have proved effective. I therefore append to my report six diagrams of passes, in the construction of which (except in the case of Mr. Cail's pass) but comparatively little engineering skill is required. I trust that my diagrams will be found of service.

I have also annexed a drawing of a guard to be placed at the entrance of mill-leats, in order to prevent salmon from entering these and similar channels.

I have the honour to be, Sir,
Your obedient servant,
FRANK BUCKLAND,
Inspector of Salmon Fisheries.

June 1875.



PLAN No. 1.—SECONDARY WEIRS.

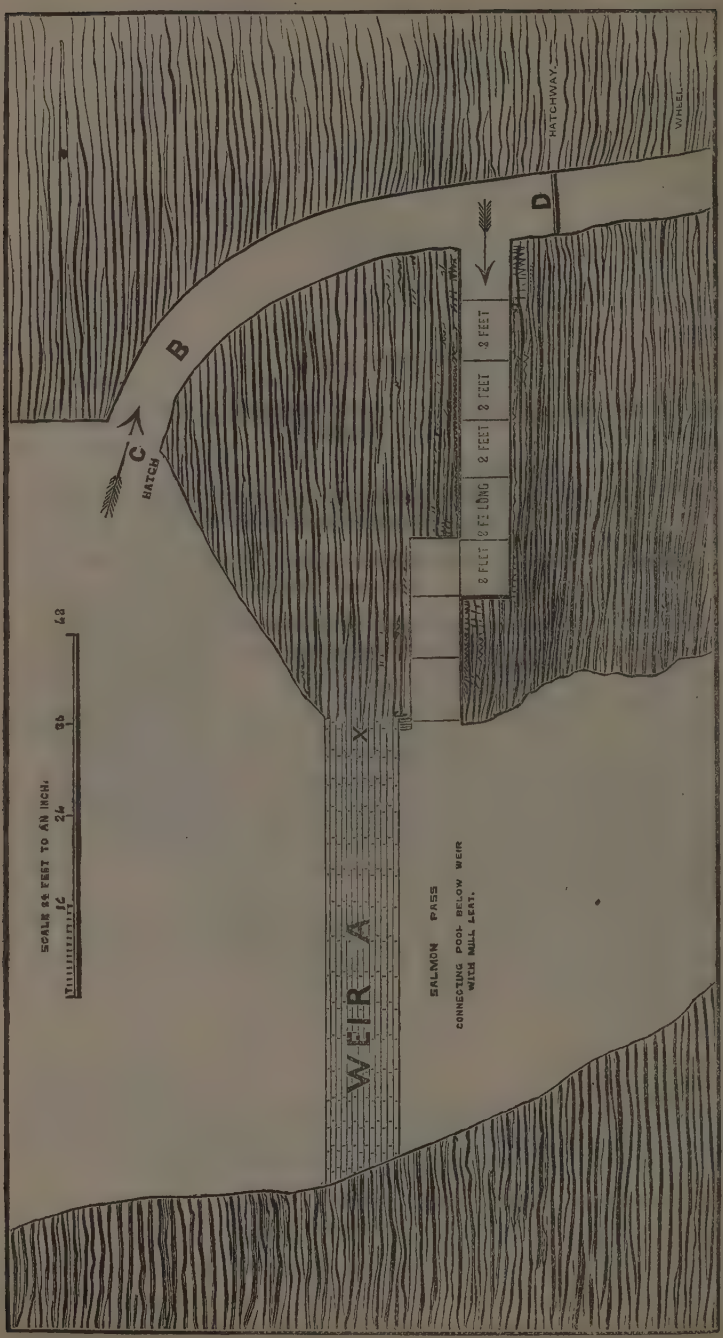
PLAN No. I.

MODE of PASSING SALMON over a WEIR by means of SECONDARY WEIRS and Diagonals.

A - - The weir.
B B A - Two secondary weirs between island and banks, backing up the water against the original weir A as seen in section A B C.
B A and B - May be built either of wood, or stones taken from the bed of the river, cemented together, and made firm with iron bars.
C - - Another secondary weir to elevate the water on the face of the weir immediately above it as seen in section A B C.
A B C - Section showing pools formed on face of original weir A by the weirs B and C.
E E - - Diagonal boards, supported on the surface of the weir A by struts against each bank so as to concentrate water into the centre of the pool below.

This plan has been found very efficacious at the Otterburn dam, on the North Tyne. It has also proved most successful at the Bran weir, on a tributary of the Usk, and at the lowest weir on the river Nairn, Scotland, where this plan has been adopted at my suggestion. I strongly recommend this plan for small up-country weirs, which are sometimes great obstructions to female salmon heavy with spawn.

A smolt and kelt guard is readily made by fixing small meshed rabbit or garden netting in front of the mill leat, taking extra length so as not to interfere with the milling power; this netting will guide the descending fish over the weir and down the diagonal.



PLAN NO. II.—PASS AT WARDEN DAM, RIVER TYNE.

PLAN No. II.

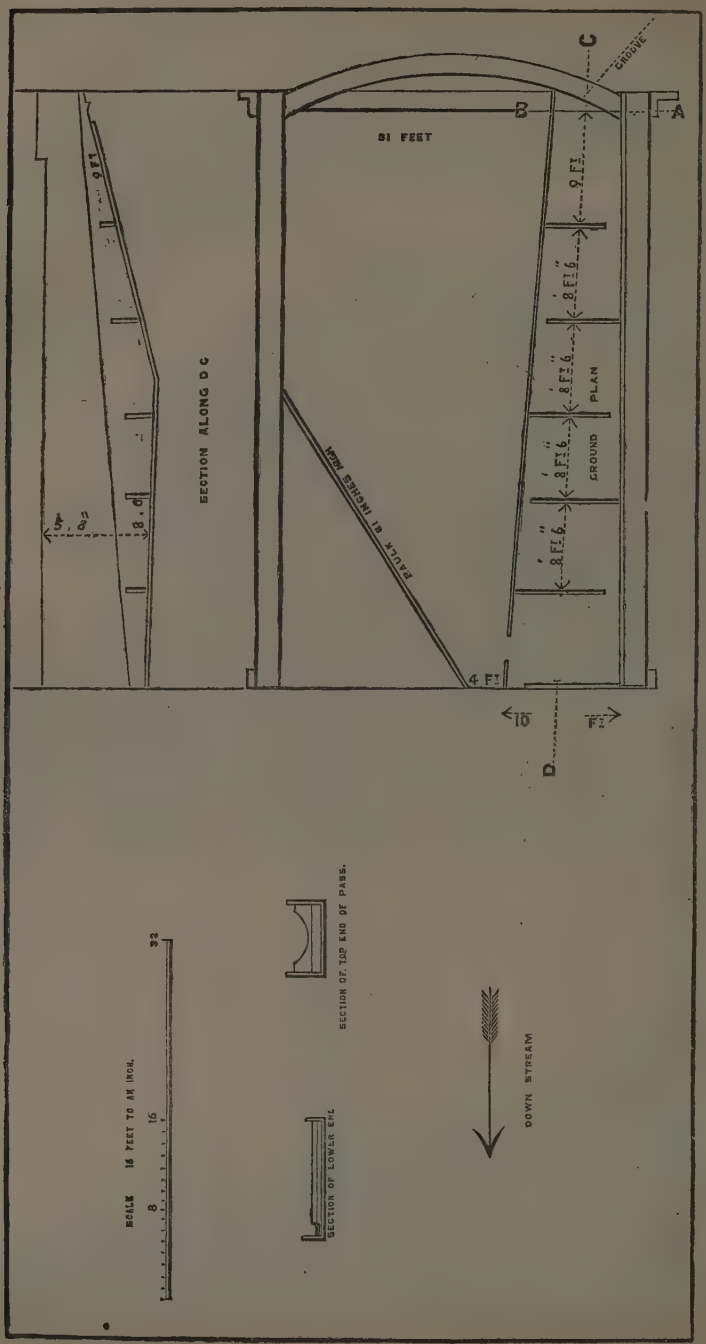
Plan of Pass at Warden Dam on the SOUTH TYNE.

A - - An old, long, high, and rickety weir—a great obstruction to fish.
B - - The mill leat.
C - - Hatches at head of mill leat.
D - - Hatchway placed across mill leat below upper opening of pass.

The pass is seen connecting the mill leat with the pool below the weir.

The large pools forming the pass are made of brick and stone, built into the ground intervening between the main river and mill leat. When the mill has done work the hatchway at D is shut down, so as to divert the water running down the mill leat through the pass. The salmon which have been waiting at the foot of the weir A then ascend through the pools of the pass into the mill leat, reaching it at a point above the hatchway D. By turning to the left they then speedily reach the river by passing through the open hatchways at C.

This pass has opened up several miles of river hitherto quite cut off from salmonidæ.



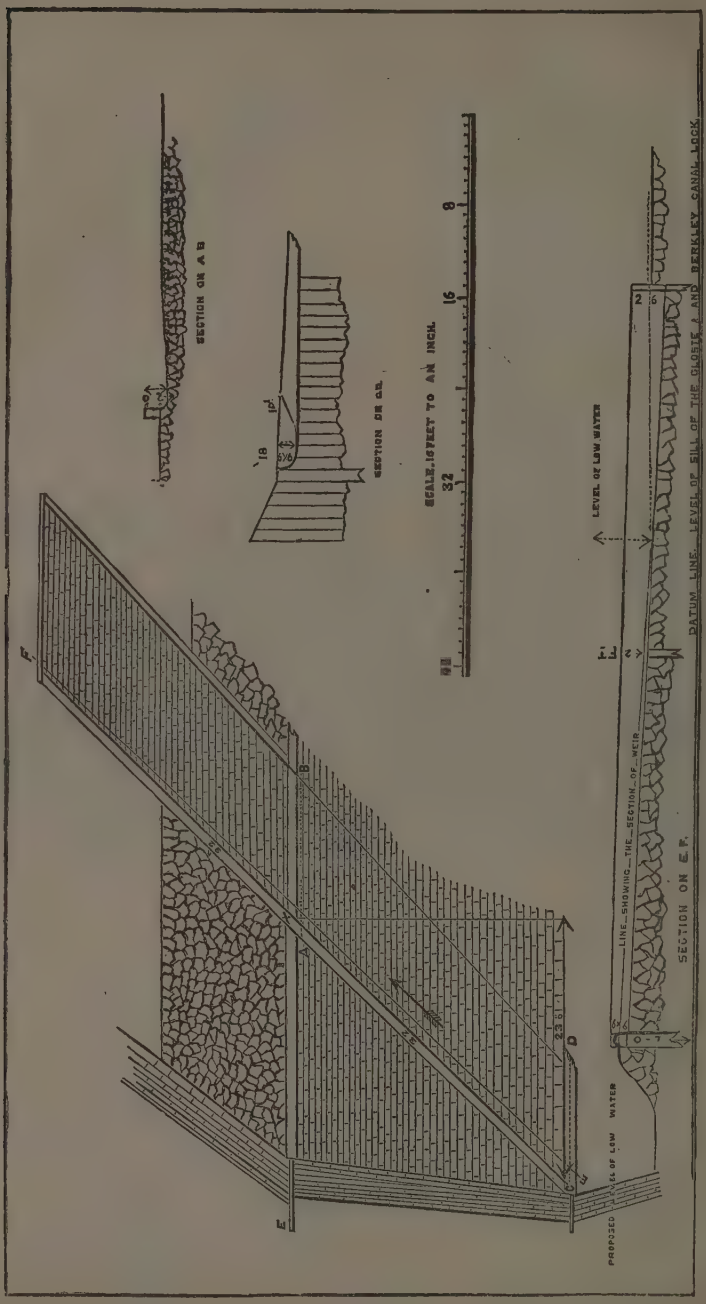
PLAN No. III.—PASS AT WESTWATER, RIVER AXE.

PLAN No. III.

PASS at WESTWATER WEIR on the YARTY, a tributary of the AXE, Devon.

C - - Stone weir built in curved shape.
B - - Wall forming part of weir, 31 feet in length.
C D - Pass on north side of weir, total length 52 feet. The pass is made of timber boxes from 8 to 10 feet in length, and from 6 to 10 feet wide. The stops are grooved out at alternate ends as shewn by the sections.

A diagonal baulk of timber, 21 inches in height, will be observed directing the water to the base of the pass. It was found that the salmon would not go into the pass, but attempted to run up by the side of the diagonal. I therefore had a cut made in the south side of the lowest box, so that the water running down the pass should attract the fish into it from a pool formed at the lower end of the diagonal. A portion of the upper sill of the weir is grooved out at C between A B. It will be observed that the pass widens as it descends. This is done to take off the force of the water as it rushes down the pass.


SECTION ON A B
SECTION ON C D.
SCALE. 16 FEET TO AN INCH.
32
16
8
LEVEL OF LOW WATER
LINE SHOWING THE SECTION OF WEIR
SECTION ON E F.
DATUM LINE. LEVEL OF SILL OF THE GLOBE & ANDERSLEY CANAL LOCK.
PROPOSED LEVEL OF LOW WATER

PLAN No. IV.—PASS AT LLANTHONY WEIR, RIVER SEVERN.

PLAN No. IV.

DIAGONAL BOARD on the south end of LLANTHONY WEIR, on the SEVERN, near Gloucester.

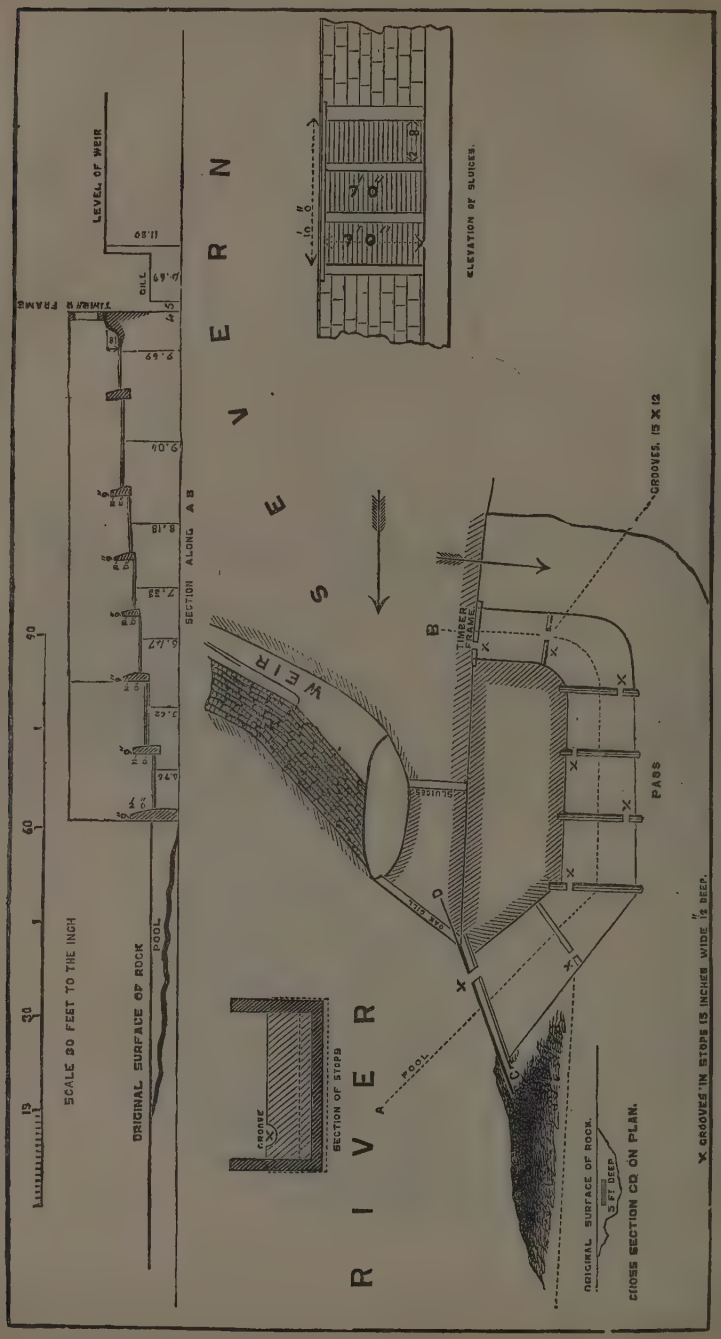
E F - - Diagonal board (looking down stream), total length 64 feet; length from sill to foot of weir, 32 feet.

C D - - Sill of weir.

A portion of the upper sill of the weir, about 12 feet, from C to D, has been removed, the cut being made in a slanting direction, see section C D. The water is thus concentrated against the side of the board and made to flow into the pool below the weir, see section C D.

E A B - Foot of weir. The diagonal board projects 32 feet below the foot of weir, with deep water.

Section E F gives the slope of the weir.



PLAN NO. V.—PASS AT PENARTH WEIR, RIVER SEVERN.

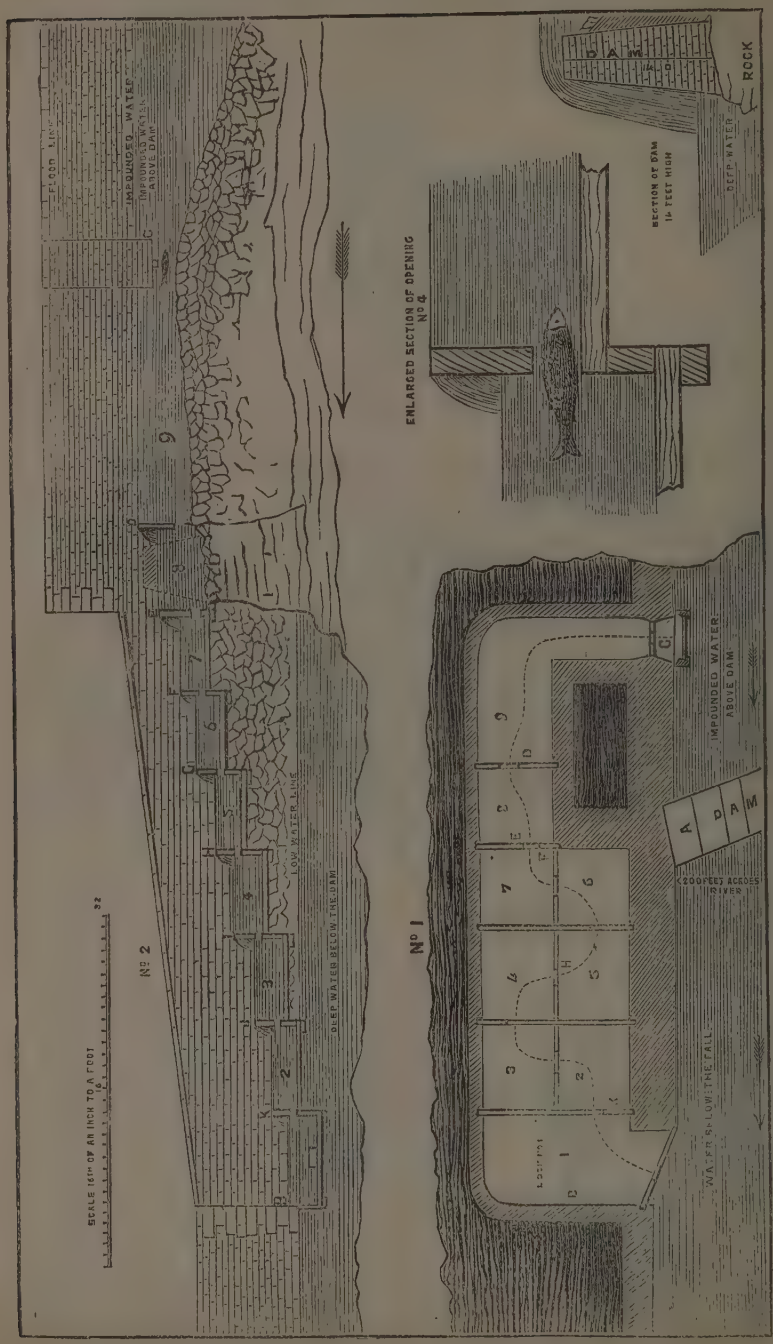
PLAN No. V.

PASS at PENARTH on the Upper SEVERN, showing the weir and the sluice to let off the flood water.

The pass is built round the side of the weir. It consists of a series of seven boxes, the total length being 80 feet; each stop is 2 feet high, and has a groove 15 inches wide by 12 deep, as seen in section. Each pool rises about 9 inches. The pass is wider at the bottom than it is at the top so as to obviate a too great boil of the water. The fish, obstructed by the weir, assemble in a pool (5 feet deep) at the bottom of the lowest step of the pass, they then get up by jumping over the stops or slipping through the grooves.

Water is admitted to the pass by means of three sluices, each sluice being 7 feet high and 2 feet 8 ins. wide. Arriving in the uppermost pool the salmon swim underneath the hatchways into the river. Section A B shows the slope of the pass. This admirable pass was designed and built by Mr. Jebb of Chester, engineer to the Shropshire Union Railways and Canal Company.

The new pass at Milford (also on the Severn, not far above Penarth,) is built on the same lines at the Penarth pass. This path is a great success.



PLAN No. VI.—PASS AT DINSDALE DAM, RIVER TEES.

PLAN No. VI.

PLAN of Mr. RICHARD CAIL'S LOCK SWIMMING SALMON PASS, at Dinsdale on the TEES.

Drawing No. 1 is a plan for a pass where the dam or natural obstruction is 14 feet above the lower water; D, E, F, &c. are a series of locks, in this case nine in number, having each a rise of 18 inches which equals 13 feet 6 inches. the top one being 6 inches below the level of the dam, making in all 14 feet, The locks from No. 2 to 8 are shown about 7 feet square with 3 feet depth of water; Nos. 1 and 9 are larger.

A is the dam which extends across the river; the pass is placed in the river bank at one side going round the end of the dam quite clear of the river and floods.

Drawing No. 2 shows an extended section of the plan No. 1, on a line drawn through each lock from the lowest lock, No. 1 to C.

No. 3 is a section of the dam.

It shows the river in a moderate state flowing over the dam, with a difference of 14 feet between the lower and higher water.

By this plan the fish have solid or unbroken water to swim in; the only current is confined to a short space at each opening and is there moderate, all the other parts of each lock being nearly still or quiescent.

Fish could leap over each partition or stop or swim through the openings shown.

The opening to feed the pass with water, which is also the exit for fish, as shown at C, need never exceed 18 inches square, and may be reduced as small as 9 inches by 7 inches; when the opening from the upper water is large, the locks should be of a size to correspond so as not to have too great a commotion or disturbance in the locks.

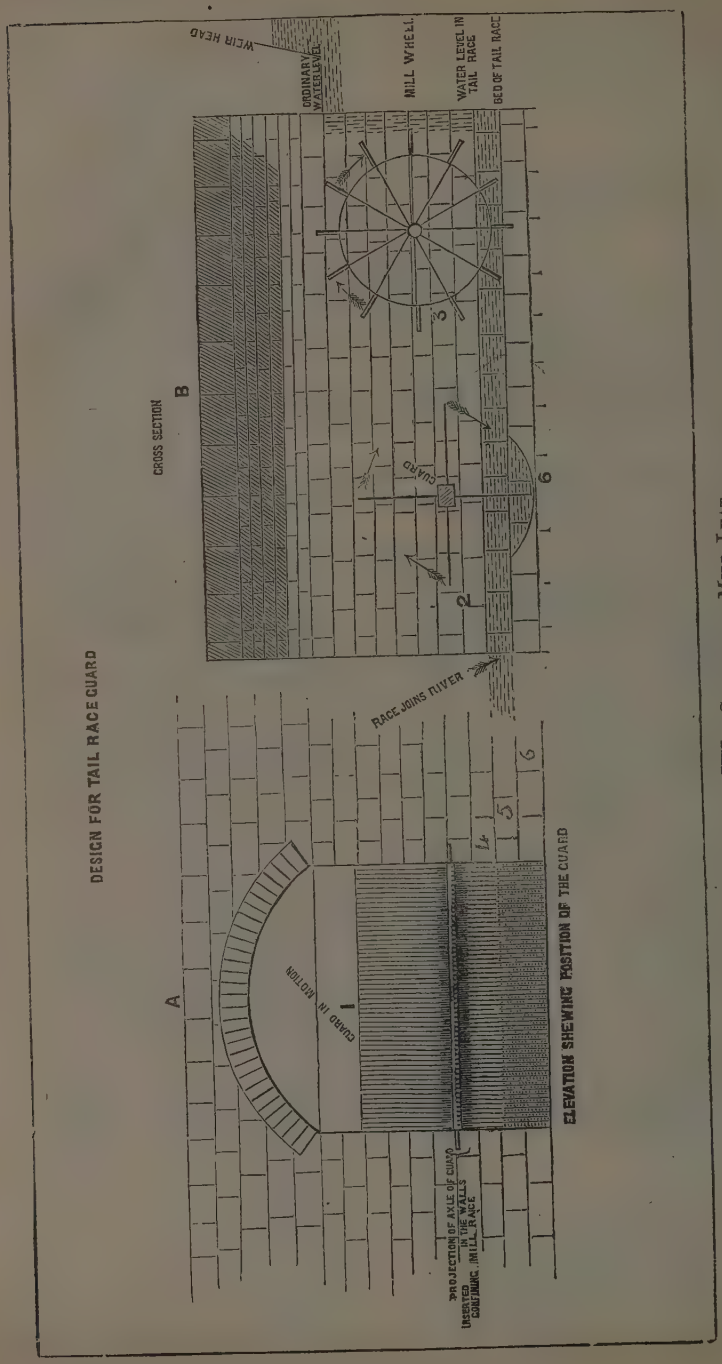
The opening at C is 14 inches high by 10 inches wide, and top of the opening 3 feet below the top or apex of the dam.

No water is allowed to enter the pass except by the opening at C, so that there is (as nearly as may be) a regular fixed quantity to feed the pass. All the openings below C, at D, E, F, G, H, I, J, and K, are 12 inches by 9 inches, or 32 superficial inches *less* than at C, therefore more water comes in at C than can pass through any of the openings below, consequently each lock from top to bottom is not only kept full but running over into the one next below.

The lowest lock has its aperture, for the fish to enter, below the level of the low water.

Section No. 4 shows a fish swimming through the opening.

Passes on this plan may be seen at work at Dinsdale Dam on the Tees, and at Felton on the Coquet. Mr. Cail is about to build one at Warkworth on the Coquet.



PLAN No. VII.—GUARD FOR MILL LEAT.

PLAN No. VII.

Revolving Tail-race Guard.

A shows the cross section of tail-race of mill, up which the fish are frequently tempted to run ;—

No. 1. Guard in motion.—A bar of wood or iron is transfixed with bars of wood or iron, crossing each other at right angles ; the wheel thus formed with four rows of spokes is inserted by axles into the walls of the mill-race as seen in diagram. The descending water keeps the guard in continual motion allowing the water to pass out but not allowing the fish to pass in.

4 is the level of the water in the leat ; 5 is the bottom of the leat ; 6 is the level of the groove.

B is a longitudinal section of the leat.

Fig. 2 shows the cross section of the wheel, as above described, revolving ; a hollow is made in the bottom of the leat in order that the fish should not slip underneath the wheel. The arrows show the direction in which it is revolving.

3 is the ordinary mill wheel.

MR. WALPOLE'S REPORT.

SIR, 31st March 1875.

IN the Reports which for some years it has been my duty to make to the Home Office, I have endeavoured, in accordance with the provisions of the law, to give, as far as practicable, "a statistical account" of the Salmon Fisheries of England and Wales, with such "suggestions for their regulation and improvement" as my experience taught me were necessary. The suggestions, however, which I have thus from time to time made, were embodied more than a year and a half ago in a new Act of Parliament. A statistical account of the progress of our fisheries, such as will be found in the appendix to this Report, hardly requires to be annually reviewed by the officer whose duty it is to compile it; and the time seems, therefore, to have arrived when I may with advantage abstain, for one season at any rate, from considering the progress of a single year, and endeavour to embrace, in one Report, the changes which have been made since 1861, and the effects which have resulted from them.

LEGISLATION BEFORE 1861.

The Salmon Fishery Act, 1861, is properly regarded as the basis of modern salmon legislation in England and Wales. Before 1861, indeed, frequent Salmon Acts had been passed by the Legislature, but the law which was thus in operation was both imperfect and inoperative. "It is no easy task," wrote the Royal Commissioners of 1860,* "to ascertain what the law really is. "Successive statutes have been passed from the 13th Edward I. "statute 1, cap. 47, down to the 11th and 12th Victoria, cap. 52., "but how much of the earlier Acts is now in force is a matter of "doubt, as the later enactments do not always repeal former "ones by express words but by implication only, and to what "extent they do so is uncertain. Some portions of the law may "also be regarded as practically obsolete, though not positively "repealed. In other cases the intent of the law is clear, but the "machinery for executing it is defective. Thus the Act 1 Eliza-"beth, cap. 17, which prescribes the size of the mesh of nets for "river fishing, gives no means of enforcing the penalty, except "in a Court Leet,—a mode of procedure now disused. The "1 George I., statute 2, cap. 18, re-enacts the law of the 1 Eliza-"beth as to the mesh, and gives a summary jurisdiction to magis-"trates, with increased penalties and forfeitures; but the latter "Act applies only to certain rivers therein enumerated. With

* Report, 1861, p. xxii.

" regard to other rivers the older statute alone is in force. One " of two consequences follows: either the magistrates strain " the law and assume a jurisdiction to convict offenders at their " own peril, or else they more prudently decline to act, and a pro- " vision of the law of great importance to the well-being of the " fisheries becomes a dead letter."

STATE OF FISHERIES BEFORE 1861.

In consequence of this state of things, the Royal Commissioners of 1860, in the elaborate inquiries made by them in the autumn of that year, found that our rivers were totally neglected, and that our fisheries had generally decayed. " The price of the fish " had greatly increased," " the rents paid for fisheries had much " diminished," and " the numbers of persons and boats employed in " the fisheries had fallen off."* The decrease they attributed to eight causes, which they specified in order, and which are as follows:—

" 1. Obstructions to the free passage of the fish.
" 2. The use of fixed engines.
" 3. Defective regulation of fence times, or close seasons.
" 4. Illegal fishing; destruction of unseasonable fish; spawning fish; spent fish; fry, or young.
" 5. The want of an organised system of management of the rivers and fisheries, affording the means of efficient protection against poaching and other destructive and illegal practices.
" 6. Poisoning of waters by the efflux from mines.
" 7. Pollution of waters by manufactures, gasworks, and other nuisances.
" 8. Confusion and uncertainty of the law, and difficulty of enforcing its penalties against offenders."†

THE ACT OF 1861.

The Bill, which was introduced into the House of Commons in the following year by the late Sir G. C. Lewis and Mr. Geo. Clive, would in its original shape have provided a more or less effective remedy for all these difficulties. In the shape in which it ultimately became law it remedied to a very great extent the first four and the last of them. It made only very imperfect provision for the prevention of pollution, either (1) from mines, or (2) from manufactures, gasworks, and other sources; and it failed to provide an organised system of management. These defects were early seen and noticed by my predecessors. Both Messrs. Ffennell and Eden in their third report drew attention to the want of machinery and of funds for carrying out the law; and towards the close of the following session a Bill was introduced by Sir Geo. Grey and Mr. Baring (Lord Northbrook) authorising the formation of boards of conservators and the imposition of licenses. The Bill was introduced at too late a period of the session to make it possible for it to become law. But it was again brought up at the commencement of the following session, with an important addition to it. Mr. Eden's experience on an Irish commission had proved to him the expediency

* *ibid.*, p. vi. † Report, 1861, p ix

of adopting simple and inexpensive machinery for inquiring into the legality of all the fixed engines throughout the country, and the Bill accordingly proposed that a Special Commission should be appointed for the purpose.

The Act of 1865.

The Bill with this addition became law in 1865. During the seven years of its existence the Commission, under the presidency, 1st, of Mr. Eden, and 2nd of Mr. Paterson, completed the work which was entrusted to it; having in that period, according to the latest return available, allowed 93, partially allowed 14, and disallowed 291 claims for fixed engines. In the meanwhile, however, the necessity for amended legislation had again become evident. The repression of fixed engines had led to the freer use of moveable nets; and these, in some cases, had proved so destructive that rivers which had made some progress towards improvement were again in danger of being fished out. The Act of 1861, moreover, had practically applied a uniform law to the whole country, and experience demonstrated the necessity of an elastic law capable of adaptation to the requirements of various localities. For these and other reasons a demand for amended legislation was raised as early as 1867; a new Salmon Bill was actually introduced in the session of 1869; a Select Committee investigated the whole subject in that and the following year; and the recommendations of that committee were, in the main, endorsed by Parliament and embodied in the Salmon Fishery Act, 1873.

The Act of 1873.

The time is not yet arrived at which it will be possible to furnish any accurate account of the results of this Act. Three years are, at the very least, required to bring a salmon to maturity, and the effects of the legislation of 1873 cannot be even approximately tested till the fishing season of 1877. Before, however, this period arrives it seems desirable to review the progress which has been made under the two previous Acts of 1861 and 1865. No really comprehensive attempt of this kind has been made since the very important Report of the Royal Commissioners of 1860, and the equally elaborate Report of my predecessors in 1862. It will be my object in the following pages to contrast the state of things which existed in those years with that which exists now.

The Tyne.

The Tyne enjoys a higher revenue than any other river. It is the most productive of English rivers, and it deserves on this account the first mention in this review. Previous to 1861 the river had been in a state of progressive decay. "The river has "been deteriorating for the last 30 years past." The proprietors in 1842 obtained a private Act of Parliament, but the private Act only "retarded a quicker decay of the fisheries."* "The value of "the Tyne, as a salmon river, has of late years much decreased," wrote my predecessors in 1861.† The decline was attributed in the neighbourhood to the increased steam traffic on the river. But

* Report of Royal Commission, 1861, Qu. 12,468, 12,554.
† Inspectors' Report, 1862, p. 12.

it was traced to more obvious causes by Messrs. Ffennell and Eden. The Act of 1842 had prohibited the use of fixed nets within a short distance of the mouth, but the proprietors had erected their nets outside the limits, where they proved just as destructive as before. Excessive fishing was attended with its inevitable consequence, the decay of the fishery. But other causes of the decline were easily ascertainable. The Tyne is composed of three great affluents—the North Tyne, the South Tyne, and the Derwent. Of these the Derwent is hopelessly obstructed by weirs and ruined by pollutions. The South Tyne, also a more or less polluted stream, was till within the last few months obstructed by a dam at Warden; while the North Tyne was the only tributary which was open to the fish. The fish, however, had only on rare occasions a chance of getting even to the North Tyne. At the head of the tideway, at Bywell, the whole river and its tributaries was blocked by a high dam, the property of Mr. Wentworth Beaumont. A witness told the Royal Commissioners of 1860 that there had been only five days in that year between the 12th January and the 5th November on which fish could have passed this weir.* The salmon thus captured with stake nets in the sea, obstructed in their passage up the river at Bywell, and cut off from two out of the three great affluents, continually declined in numbers.

Soon after the Act of 1861 was passed measures were taken for remedying this state of things. In 1862 Mr. Wentworth Beaumont threw down Bywell Dam and at once opened up the whole of the North Tyne. In 1869 the conservators purchased and threw down a dam at Woodburn which had previously blocked the Rede, the most important tributary of the North Tyne. In 1872 they decided on constructing a pass round the dam at Warden, which was completed in 1873; and thus opened up the South Tyne. About the same time they built an admirable pass at Otterburn, another important block on the Rede; while they have since then taken steps to facilitate the passage of fish over a dam at Chollerford, a minor obstruction on the North Tyne itself.

These successive improvements have naturally involved considerable expense, but they have had the desired effect of opening the North Tyne, the South Tyne, and the Rede, and have been attended with considerable advantage. The fishery has rapidly improved. In 1872 the Conservators estimated that no less than 129,100 fish were taken in their district, and all the fishermen on the Tyne are agreed that the take in 1868 was even larger. For a few years the riparian proprietors on the river undoubtedly derived a very substantial benefit from the improvement which had thus taken place. The produce of the fisheries, both in the estuary and in the river, increased, and the proprietors were encouraged to continue the work of protection which had begun so prosperously. In 1866,

* Report of Royal Commission 1861, Qu. 12,857.

nowever, some of the fishermen of Cullercoats, a fishing village a short distance north of Tynemouth, decided on attempting to take salmon in the sea. For this purpose they introduced the "hang-net," which, to quote an expression used by of one themselves, "they had not had the sense" to use before. The attempt was an experiment. It proved, however, a very successful one. The few hang-nets used in 1866 led to the employment of a much greater number of nets in 1867; the nets increased much more largely in 1868, both in number and length; till at last hundreds of nets, some of them more than a mile long, might have been seen at night fishing for salmon in the sea north and south of the mouth of the river Tyne.

The effects on the river fisheries were immediate. In a fishery two or three miles below Newcastle (Mr. Emmett, tenant)—

1,252	salmon	were taken by	2	nets in 1867
695	,,	,,	4	,, 1868
425	,,	,,	4	,, 1869
559	,,	,,	5	,, 1872
226	,,	,,	5	,, 1873;

while, on a fishery immediately above Newcastle, in which the uncle of the present tenant (Mr. Grant) made 1,500*l.* in 1867, money was lost in 1868 and 1869, and the take subsequently was only:—

100	fish	in 1870
95	,,	1871
80	,,	1872
36	,,	1873

The rod fisheries were at the same time ruined. The chairman of the North Tyne Committee and his son caught 97 fish in 1866, 35 fish in 1868, and the number so taken gradually fell off till it was reduced to only one fish in 1873.

The decline in the public fisheries in the sea has also been rapid. The take in 1872 was, with one exception, the highest that had up to that time been known. But over-fishing produced its inevitable consequences. The take was reduced from 129,100 fish in 1872, to 86,792 fish in 1873, and to 21,746 fish in 1874. The produce in 1874 was, in other words, only one sixth of the produce of 1872.

The Conservators, it may be hoped, have succeeded, under the amended Act of 1873, in obtaining a remedy for this disastrous state of things. The salmon are in the habit of congregating in large numbers behind the two solid masonry piers which have been constructed by the Tyne Navigation Commissioners north and south of the entrance of the Tyne. These piers formed the most convenient places for the hang-net fishermen, and thousands of salmon were annually taken there. The Conservators have now made a byelaw prohibiting any netting for salmon within a certain distance of these piers. The byelaw formed the subject of the first important inquiry which it has been our duty to undertake under the new Act. Though the Secretary of State was compelled to disallow it on a technical point, there has, since his

decision was given, been time for the conservators to frame a new byelaw with the same object as the old one. This byelaw has since been confirmed by the Home Office, and it may accordingly be hoped that the fisheries on the Tyne will recover from the serious danger with which they were threatened.

If this remedy should prove successful, the experience of 1868, 1872, and 1873 may induce us to hope that a harvest of at least 80,000 salmon may, on an average, be annually gathered from the fisheries of the Tyne. It would be wrong, however, to omit mentioning the circumstance that the Tyne, the most productive of English rivers, is threatened with one serious danger. Nothing but the constant ebb and flow of the tide enables the fish to pass the pollutions of Newcastle. The Derwent is utterly destroyed by mines and weirs. The South Tyne is injured by mining pollutions, and though the North Tyne is comparatively pure, it is polluted in an increasing degree by colliery washings and other refuse. The danger from pollutions is the more serious because Tyne water is abstracted in considerable quantities for the supply of Newcastle. I trust that remedial legislation may be sanctioned by Parliament before the fisheries are destroyed by mineral and manufacturing refuse.

THE USK. The Usk is a smaller river than the Tyne. The latter drains 1,130 square miles of country; the former only 540 square miles, It speaks highly, therefore, for the care which has been bestowed on its fisheries, that its Conservators have at their disposal a larger income than any other Board except the Tyne. The amount of its revenue justifies me in giving the Usk the second place in this review. The Usk had enjoyed the advantages of preservation before the Act of 1861 was passed. A voluntary association, of which the late Lord Llanover was chairman, and the late Mr. Stretton, hon. secretary, had worked for years with ability and discretion in protecting the fisheries. This association had taken some of the fisheries in its own hands, and had re-let them on conditions of its own making. In particular, an important fishing weir at Trostrey, below Usk, had been made passable to fish. The best results had followed these wise proceedings. The decay of the river had been arrested and the fish had increased in numbers. When the Act of 1861 was passed an organization already existed, prepared and competent to undertake the work of protection. The same policy which had already been pursued was carried out more actively than before. In 1869 Trostrey weir was purchased and thrown down. Forge weir and Newton weir on the main river have been provided with passes. The Cynrig, the Senni, the Bran, and the Tarell have been partly opened up or kept open by the provision of fish passes; and the work of cultivation has been carried on in the most comprehensive and scientific manner.

Scientific cultivation, energetically carried out, was attended with its natural consequences. "The Usk," wrote my predecessors in 1861 (1st Report, p. 9):—

"77 miles in length, and considerably the smallest of these three rivers (viz. the Severn, Wye, and Usk), is an example of what could be effected for the im-

provement of salmon fisheries, even with the former contradictory and imperfect law. Seventeen years ago, a fishing mill weir at Trostrey, eight miles above the tideway, barred the river completely, and not a fish escaped the boxes; the value of the mill and fishery at that time was 27*l*.

"An association was then formed by the energy of one or two neighbouring gentlemen, who rented it, together with the fishing, from thence to the mouth of the river. The weir had been raised (as we have found in other cases) far above the height required for the working of the mill, with the object of discharging through the boxes the surplus water, which otherwise would have gone over the weir, and enabled the fish, taking advantage of the flood, to overcome the obstruction. Their first step was to alter the boxes, so as to give the fish a free passage upwards, and to reduce the height of the weir to that which was necessary for the mill. The net fisheries below were sub-let, and the other water preserved for rod fishing to subscribers. The result has been that several putcher fisheries have been set up on the coast, where none previously existed; the existing putcher fishery is said to have been doubled; the net men, restricted to fishing four days a week, pay the same rent that they previously paid when allowed to work without limit; that the water above the weir, where fishing was never thought of, has now become valuable, and that, although when the association was formed there were only 14 or 15 resident salmon rods on the river, there are now 120, in addition to which many strangers avail themselves of the permission given to take season, or weekly, or daily tickets."

Since that time the increase has been much more marked; the river is literally full of fish; it has earned the reputation of the best angling river in England and Wales; the value of the fixed engines at the mouth is steadily increasing, and 2,000 fish have been taken in a year with the rod by the 180 gentlemen who fish the Usk.

It may, perhaps, be asked why the increase of fish in the Usk has not, like the increased stock in the Tyne, produced over-netting. The answer is easy. The Usk is one of the rivers which flow into the Bristol Channel, and the peculiarities of the estuary necessitate its being fished with fixed engines—putts, putchers, and stop nets.* Fixed engines, however, are legal only when they have existed from time immemorial, and there is therefore no possibility of an addition being made to their number. There are indeed other portions of the river where moveable nets could be used; but the best of these portions are rented by the Association, which actively assists the Conservators; and netting is either not permitted at all, or allowed only under the supervision of their own officers. So far from being over-netted the river hardly produces the harvest which, from its stock of fish it might fairly be expected to yield.

But, though the Usk is consequently free from one of the serious dangers which threaten destruction to the Tyne, there are other difficulties upon it which require notice. The chief tributary of the Usk is the Ebbw, and the Ebbw is totally destroyed by pollution. The next tributary of importance is the Afon Llwyd, and the Afon Llwyd is almost as polluted as the Ebbw. The main river is, in itself, affected by the sewage of Abergavenny, Crickhowell, and Brecon, while its tributary the Clydach is also polluted by the refuse from a rich mining country. The evil which

* For a description of these see Inspectors' 12th Report, p. 86.

these pollutions occasion is augmented by the circumstance that a considerable portion of the river (in dry weather the whole river) is diverted into a canal at Brecon, and that the volume of its water is further reduced by the London and North-western Railway Company's pumping station at Abergavenny. The Usk Board have endeavoured to do their best to minimise these evils. I have on more than one occasion attempted to render them such assistance in the matter as I was able to afford. But the evils are not cured; they are, at the present moment, nearly as serious as ever, and the Usk, like the Tyne, is therefore exposed to a serious danger which nothing but a Pollution Act can effectually remedy.

The stones in the tideway half a mile below the point at which the Afon Llwyd flows into the Usk, were, I was informed last February, stained a bright yellow with the refuse from the tinplate works on that tributary.

THE RIBBLE. Taking the amount of revenue as the test of production, the Ribble deserves the third place in this review. Its Conservators during the past year had an income of 724*l.* at their disposal. The Ribble, the most productive of the Lancashire rivers, has a catchment basin of 585 square miles, or about equal to that of the Usk. The Ribble, like the Usk, had been protected by a local Association before the Act of 1861. "The Association rented "about 20 miles of the lower portion of the river, shortened the "fishing season . . . . and adopted other rules regarding protec- "tion which appear to have produced considerable improvement, "or at least to have arrested the progress of decay." Seven or eight years, however, before the Act of 1861, some Scotchmen erected some stake nets in the estuary, and "inflicted a heavy blow and great "discouragement by intercepting a large portion of the produce "created by the care and expenditure of the Association." The natural result ensued: the members of the Association lost heart, and but for the Act of 1861 would have abandoned the work of preservation.*

The Act of 1861 made the stake nets, the cause of this discouragement, illegal. Their removal at once revived the drooping energies of the association. Protection was resumed, and a very great improvement immediately took place. "The take of fish," wrote a well-informed authority at the close of 1866, "has "very much increased since the passing of the Acts of 1861 "and 1865, both in fresh and tidal waters, which, in my opinion, "is in a great measure to be attributed to the Acts being pretty "fairly carried out in this district, particularly in the preservation "of smolts, but something may also be due to the extensive "artificial propagation. The Association rented the tidal waters "for some years, and in 1859 only took 90 salmon during the "season, whilst the lessee of the same fishery (according to the "report of the water bailiff), took 9,000 last season, and the

* *Vide* Inspectors' 1st Report, p. 26.

"whole take in the rivers and estuary, according to the same "authority, were 15,000, of which 1,200 were taken by angling."*

The salmon harvest in 1867 was almost as productive; 15,000 to 16,000 fish were taken by nets, and about 100 by rod. Since then, however, the results have been hardly so satisfactory. The take in the subsequent years will be best seen by the following table:—

	Nets.	Rods.
1868	12,900	20
1869	6,685	167
1870	7,650	125
1871	10,412	202
1872	8,180	195
1873	9,140	374
1874	9,542	199

In other words, a river which promised to produce on an average 15,000 fish a year, is only yielding 9,000 or 10,000.

This unsatisfactory condition of things is probably attributable to two causes—(1) over fishing, (2) the increasing pollution of the river. Before the Act of 1861 was passed there was little or no netting in the public waters. The subsequent increase of fish led to an enormous addition of nets in these waters. In 1867, the first year for which we have any statistical information on the subject, the Ribble was fished with 2 baulk nets, 42 draft nets, 77 haaf nets, 1 shackle net, 2 jacks, and 323 rods. Of these the haaf nets were the only nets used in what were then thought to be public waters. The Conservators in that year were so alarmed at the increased number of these nets and at their effects that, with the sanction of the Secretary of State, they raised the license duty on them from 2*l.* 10*s.* to 5*l.* The additional charge made, however, no impression on their numbers. The haaf-net licenses increased to 83, while the draft nets decreased to 24, (four of which were used in public waters), and the rods to 240. The result in 1869 was slightly different. The fishermen found that it answered better to pay 5*l.* for a draft net than 5*l.* for a haaf net. The draft nets in public waters increased from 4 to 15, the haaf nets decreased from 83 to 64. The draft nets in private waters decreased from 20 to 19, the rods from 240 to 231. Two years later, or in 1871, the draft nets in public waters had increased to 33, the haaf nets to 71, and the draft nets in private waters had decreased to 13, while the rods rose to 302. Since that time a considerable doubt has been thrown on the right of the public to fish in the tideway at all, and I believe they only do so by paying a small toll to the proprietors. The Board in 1873, therefore, in replying to our usual questions, stated that there were no public waters in the district, and in the present year they have only issued, under protest, 4 draft net licenses for public waters. But the netting which commenced with such activity in 1867 is

* Inspectors' 6th Report, p. 40.

still continued in these waters. The profits of the river are transferred from the fresh water to the tideway, and the proprietors, deprived of the share to which they conceive themselves to be entitled, are seriously discouraged.

But over-netting is only one of the two causes which are interfering with the development of the Ribble. Big Ribble, as the main river is called below Calderfoot, is composed of three great affluents, the Ribble, the Calder, the Hodder. Of these, the Ribble itself is the principal. But the Ribble practically ceases at Settle, where it is blocked by a succession of impracticable weirs. The Calder drains the manufacturing towns of Burnley and Accrington and is terribly polluted. The Hodder itself is pure, but half the Hodder is diverted in dry weather to supply the town of Preston with water. Nor does this statement represent the full extent of the pollution. The Ribble itself is seriously polluted (1) by the sewage of Preston, (2) by the sewage of Clitheroe and the paper mills near that town, (sewage and paper refuse being both discharged into the Primrose brook, which flows through that town into the Ribble), and (3) by the Darwen, a tributary which joins the river at Preston, after having drained Blackburn and the adjoining locality.

The extent to which this pollution exists may be inferred from two reports from the head water bailiff on the Ribble. The first was communicated to us by the Board in July last; and is as follows:

"Within my recollection I never saw the Ribble in such a polluted state as just now.

"The little rain we have had at Preston has cleansed the sewers, and they have emptied themselves into the river. The water being so very low, the sewage cannot get down to the sea, and when the tide rises the river not only presents the appearance of a stagnant pool, but emits a sickening and disagreeable odour. In consequence of the filth getting into the gills of the fish, hundreds of sprods and morts, and occasionally salmon, besides other fish, are picked up either dead or dying after every tide. The wholesale destruction is frightful.

"The river is really in a most filthy state; in some places several feet deep with black stinking mud, and unless some steps are immediately taken the fish in the Ribble will be completely extinct. In the event of a 'freshet' first coming down the Calder, it will bring with it a large amount of filthy refuse from the chemical and other works at Accrington, Church, and Burnley that has been accumulating during the dry weather, and I feel certain it will destroy nearly every fish betwixt Calderfoot and Lytham, a distance of 30 miles.

"The once famous river Ribble is rapidly losing in productiveness, and as I have before said, unless prompt action be taken to prevent the flowing into it of the sewage, &c. of Preston and other places, it will cease to be a salmon river."

The second of these two reports is as follows:—

"As regards the pollution of the river, I think this year (1874) has been the worst for some time. On the 11th and 12th July the fish were destroyed by the pollution from the paper mills at Clitheroe for a distance of three miles. Again, on the 17th, to Hodder Foot. From the 14th of July to the 22nd there were hundreds of fish picked up dead in the tideway at Preston. I attribute it to the sewerage and chloride of lime used at Preston during the hot weather to keep back disease, for the water was low at the time, and it accumulated in the river to the depth of 2 feet in many places, and was washed

up every tide, and fish could not live in it. And I may say the stench that arose from it was abominable. On July 24th the fish were destroyed by the dirty water which the floods brought from the Darwen. The fish on this occasion were destroyed for six or seven miles—eels, flukes, salmon, morts, even anything."

The Ribble, then, is a still more striking example than either the Tyne or the Usk of the necessity which exists for a new Pollution Act. Its fisheries cannot be developed, it is possible that they may not be maintained, unless some effectual measures are taken for purifying our streams.

THE SEVERN.

Still following revenue as the test of production, the Severn takes the fourth place in this review. The Conservators during the past year enjoyed an income of 633*l.* The income of the Tyne is 1,193*l.*, that of the Usk 908*l.*, and that of the Ribble 724*l.* The Severn therefore by this test does not contrast very unfavourably with any of these rivers, but there is a wide difference between them. The Tyne has a catchment basin of 1,130, the Usk of 540, the Ribble of 585 square miles. But the Severn drains an area of 4,350 square miles, or a catchment basin four times as large as that of the Tyne, eight times as large as that of the Usk, and seven times as large as that of the Ribble. Its adequate protection would require therefore a revenue seven or eight times as large as is necessary on these rivers. Like the Ribble and the Usk, the Severn before 1861 enjoyed unusual advantages. It had been placed under a special Act of Parliament in 1778, and its fisheries had been more or less carefully guarded by a voluntary Association formed in 1843. This preservation produced the invariable result. "Associations on the Severn, the Wye, and Usk," wrote my predecessors in 1862, "took "measures for the preservation of those rivers. . . . The "efforts of these bodies increased the fish, but the fixed engines "increased also. Discouraged by this result, the Worcester, "the last of the Severn Associations, would have broken up last "year but for the new Act."* "It is a subject for regret," they wrote in 1863, "to see a river of such vast size and "great capabilities lying waste, for it is a considerable public "loss. . . . We have heard the produce of the river esti- "mated by a person of much practical knowledge and careful "research, at 1,000*l.* worth per annum, wholesale price; and we "think that we shall be quite safe in saying that the aggregate "take could not exceed twice that sum."† Amended legislation has slightly improved this condition of things. The provisions of the law and the decisions of the Special Commissioners have effectually prevented any further additions being made to the number of fixed engines. The imposition of a license duty has restricted the increase of moveable nets. The fishermen now think it worth while to pay more than 600*l.* a year for the privilege of fishing. It was estimated by the Conservators that 11,460 salmon were taken in 1869; 22,500 in 1870; 16,914 in 1871; 6,500 in 1872; 10,420 in 1873, and 16,500 in 1874.

* Inspectors' 1st Report, p. 5. † Inspectors' 2nd Report, p. 28.

These results unquestionably show that considerable good has been done, though the yield is still infinitely less than might fairly be expected from a river of such size and capabilities as the Severn.

It is unsatisfactory to find that 15,300 out of the 16,500 fish which were taken in the Severn were captured in the tideway; that only 1,200 were taken throughout the remainder of the district; and that of these only 16, or 1 in every 1,000, were taken by angling. This state of things is probably chiefly due to the navigation weirs, with which the lower reaches of the river are blocked, though it may also be partly traced to the pollutions from Gloucester, Tewkesbury, Worcester, and other places. The weirs on the Severn have indeed been provided with passes, some of which are really efficient, while others are only partly so. But weirs, even when they are provided with the most efficient fish passes, alter the character of the river and stop the ascent of fish. The fish, after surmounting the weir, find a deep quiet pool in which they are tempted to rest, and, in consequence they fail to pass on to the upper proprietors. The natural result of this state of things is that the upper proprietors, deprived of all interest in the fishery, decline to take any steps for the preservation of the river. The small staff of bailiffs in the employment of the Conservators are unable to put down poaching; and, though the river improves, the improvement is slower and less marked than would otherwise be the case. It is indeed impossible either to expect or desire a complete remedy for this state of things. Navigation is a matter of too much importance to be sacrificed for the sake of the fishery, and all that the Navigation Commissioners can either be expected or desired to do is, by the construction of efficient passes, to minimise the evil which their works inevitably occasion. But the other evil of pollution could be effectually cured by an adequate Pollution Bill. Sewage, and manufacturing and mining refuse, are commonly poured into the Severn. The evil is continually increasing with the growth of trade and the additions to the population; and, though the state of the Severn is hardly so serious in this respect as that of the Ribble, its pollutions alone would prevent the full development of its fisheries.

THE EDEN.

Still taking the amount of revenue as our guide, the Eden claims the fifth place in this list. "Edenhead," wrote my predecessors in 1862, "is at the foot of Lady Pillars, from "the opposite side of which springs the Swale, and after a "course of 70 miles the Eden falls into the Solway Firth. The "Eamont, Lowther, Lyvenet, Crodundle, Martindale, Peterel, "Caldew, and other streams swell its volume of water, and afford "grand nurseries for salmon. It contests with the Severn the "merit of being the earliest river in England. But its fisheries "are at a very low ebb, and its position most unsatisfactory. . . . "The fish have not been allowed to ascend in sufficient numbers "to stock the river and to offer an inducement to the upper "proprietors to protect them, and the lower men, whose short-

" sighted over-fishing has brought about this result, have nothing " to mitigate the evil of their creation. . . . The poachers in this " county are numerous and bold. Going out nightly, they " sweep the shallows for trout and brandlings, as salmon fry are " there called, and return in the open daylight with their wet nets " and filled baskets on their shoulders, defying police and keepers. " These nets may be seen drying on the sides of the houses in " Penrith."*

The poaching was thus directly attributable to the over-fishing in the lower waters, and the over fishing was certainly serious. " I may say," observed a witness to the Royal Commission, " 1860, that there are no less than between six and seven miles " of nets from Newbie to Burgh, of which less than a quarter " part would be on the English side. There are 17 nets on the " English side, which embrace an extent of about 2 000 yards, " then on the Scotch side, from Kirtle point and Newbie there " are 26 nets, which would embrace about 9,000 yards more " or less, so there is, in fact, four times as much on the Scotch " side as on the English side."†

It was natural that, under these circumstances, the produce of the river should annually decrease. An Association endeavoured to arrest the decay, but its funds were insufficient. The produce continued to fall off, and the rents paid for fisheries to decline. " I have made a search," said the city treasurer of Carlisle to the Royal Commission of 1860, " through the Corporation books " for the rents received for the fishery from the beginning " of the last century ; it commences with a rent from 1706 to " 1718 of 15*l.*, and that goes on progressively till it becomes " 300*l.* in 1730 ; then it goes on pretty much at that till 1763, " when it rises to 587*l.* ; a subsequent letting is 800*l.*, and it " continues at from 700*l.* to 800*l.* up to 1781. In May 1781, an " action was commenced for the removal of the stell. The high " rent that I stated before was occasioned by the Corporation " having put a stell in the river, by which they intercepted all the " fish. The losing of so large a rental by the Corporation seems " to have caused a collapse altogether, as we find no more record " of the fishery in the books of the Corporation till 1801, when it " was let for four years at a rent of 32*l.* to Lord Lonsdale, and it " was afterwards continued up to 1841 to Lord Lonsdale at the " same rent, when it was let to a different person for 52*l.* 10*s.* for " 14 years by public tender, and I believe that letting went " successively on. At last the gentleman said he had lost money " by it, and declined to take it except at a much reduced value, " and it was let to other parties for the sum of 32*l.* for four years, " at the expiration of which time it was let to Mr. Carruthers, " who took it with a view of improving the fishing, at the sum of " 55*l.* 13*s.* 4*d.* for a term of six years."‡ The Commissioners learned from Mr. Carruthers himself that even at this rent the fishery failed to pay.§

* Inspectors' 1st Report, pp. 16–17.
† Qu. 10,808.
‡ Qu. 11,204.
§ Qu. 10,802.

The Act of 1861 and the exertions of the Special Commissioners partly remedied this state of things. The fixed nets on the English side of the Solway were abolished, and the fisheries immediately began to improve. In January 1869 I attended a meeting of gentlemen interested in the subject, and the meeting fortunately resulted in the formation of the river into a fishery district in the course of that year. The license duties, which the Board were able to impose, furnished the Conservators with the means of preservation. More effectual protection led to increased production, and the Eden since that time has constantly continued to improve. Its progress may perhaps be inferred from the following figures. The amount paid for license duty amounted in 1870, to 353*l.*; in 1871, to 405*l.*; in 1872, to 406*l.*; in 1873, to 461*l.*, and in 1874, to 520*l.* The Eden at this moment is, in fact, the most improving and the most promising river in the whole country.

There is every reason to hope that this improvement will continue. No English river has, for its size, greater natural advantages than the Eden. Its main stream contains an abundance of excellent spawning grounds. Its tributaries, the Lowther and the Eamont, are fed from Haweswater and Ulleswater. The Solway forms a magnificent feeding ground. The river is a very early one, and the harvest therefore peculiarly valuable. The Eden, however, like every other river, has its own difficulties. Carlisle is increasing in population and importance, and the pollutions of this city are in consequence gradually becoming more serious. The Caldew, one of the chief tributaries of the Eden, rising in Skiddaw, is polluted with lead-mine refuse, and obstructed by high and impassable weirs. The fish are entirely excluded from the Eamont by a high weir at Penrith; and the Eden itself is blocked by a dam at Armathwaite, which forms a considerable obstruction to the ascent of fish. Nor are these the only difficulties which the Conservators have to encounter. The fixed nets have been completely removed from the English side of the Solway, but on the Scotch side the fixed nets still remain, intercepting the salmon in their passage to the Eden and the Esk, and not even paying a license duty towards the protection of the rivers in which the fish are undoubtedly bred. The position of the Eden can never be entirely satisfactory while the Solway question remains unsettled, and there can be no doubt that a very simple remedy could be easily found for it. The Solway, as a reference to any map will show, is a conical shaped bay, (dividing the coasts of Kirkcudbright and Dumfriesshire from Cumberland), sufficiently broad at its mouth, but narrowing to very moderate limits at its eastern end. The Esk and the Eden (the one flowing from Peeblesshire, the other from Westmoreland) unite their waters near the apex of the cone. The Nith, the Annan, and the Kirtle fall into this bay on the Scotch side. The Wampool falls into the bay on the English side. The Kirtle and the Wampool are comparatively unimportant rivers which require little notice here. The Nith and the Annan, the Esk and the Eden, are

all important rivers which deserve particular attention. A fish coming up the Solway from the sea to any of these rivers must pass (1) the mouth of the Nith, and (2) the mouth of the Annan, before, (3) it can arrive at the junction of the Esk and the Eden. Under any circumstances, then, the proprietors of the fixed nets at the mouth of the Nith or the Annan must be able to levy a certain toll on Eden and Esk fish; but it is contended by the Conservators of the Eden that the moment the fish have passed Annan mouth they may *primâ facie* be assumed to be going to the Esk and the Eden. They insist, therefore, that all that portion of the Solway which lies east of Annan mouth ought to belong to the estuary of these rivers. It so happens that the North British Railway is carried across the Solway a little to the east of this point, and the bridge forms an admirable boundary for the estuary. If Scotland and England formed one country and were placed under the same law, there can hardly be the shadow of a doubt that this common-sense arrangement would be carried out. But the Scotch and English Salmon Acts unfortunately differ in many important respects. Fixed engines are legal in one country and illegal in the other; the annual and weekly close seasons are also different in the two countries. A 2-inch mesh is allowed on one side of the Firth and a $1\frac{3}{4}$-inch mesn on the other. All these circumstances make it, of course, exceptionally necessary to remove the anomaly which exists on the Solway; but these circumstances make the proprietors on the Scotch side peculiarly indisposed to adopt the only practicable remedy for it. The Legislature has already placed the Esk, which for the greater part of its course is in Scotland, under the English Salmon Acts; but the most strenuous opposition is raised to any suggestion to place the north shore of the Solway, which is really only the estuary of the Esk, under the same law. Under these circumstances it may, perhaps, be desirable to revert to a middle course, and place all the rivers flowing into the Solway under a separate Act. Up to 1861 the Solway had always been treated in this exceptional way. The Tweed, the border river on the east coast, is still the subject of special Acts, and under existing circumstances no other remedy seems practicable.

THE WYE.

The Wye is, in point of size, a more considerable river than the majority of those to which it has hitherto been my duty to refer. From its source at Plinlimmon to its mouth at Chepstow it is 148 miles long, and drains an area of 1,655 square miles. It is, therefore, more than three times as large as the Ribble, nearly three times as large as the Usk, nearly twice as large as the Eden, and 50 per cent. larger than the Tyne. Its natural capabilities are commensurate with its size. Though many of its most important tributaries are closed, it has an abundance of magnificent spawning ground; its estuary is full of food for the fish; there are no weirs on the main river below Rhayader; and the pollutions are comparatively unimportant. The Wye, then, is a river which ought to have displayed almost unlimited powers of expansion. In 1860

its fisheries were at a low ebb. "The Duke of Beaufort," wrote the Royal Commissioners, "possesses a right of fishing about 20 miles "in extent on the lower part of the Wye. . . . The rental which "his Grace receives for this fishery is only 120*l.* per annum. This "is a striking but by no means solitary case of extreme depres- "sion."* "The Wye," wrote my predecessors in 1862, "possesses "at the present moment a better stock of fish than any other "river, with the exception of the Teifi and Usk . . . . but, com- "pared with its capabilities, its fisheries are in a lamentable "condition."† The Act of 1861, however, soon effected a great change. "In the autumn of 1862 the Duke of Beaufort, who "owns the lower fisheries, offered a subscription of 300*l.* to "be spent in preserving the fish during the breeding season, "if the upper proprietors would assist in forwarding such "measures as might be necessary. An additional sum was shortly "raised of rather more than 300*l.*; and, through the kindness of "the owner of the Galway fishery, we were enabled to obtain "the services of Mr. Miller, as a superintendent for the winter, "who, together with his brother has had the management of that "fishery since 1852. . . . Under this superintendent 39 men were "employed for the months of November, December, and January, "and the fish were thoroughly protected. . . . The prospects "of the Wye are perhaps better at the present moment than "those of any river in England or Wales."‡

Everything, therefore, in the opinion of my predecessors pointed to the immediate improvement of the river. It is lamentable to contrast the expectations which were then formed with the result which has actually taken place. It was my duty, at the close of last year, to hold, in conjunction with Mr. Buckland and Mr. Paterson, an important and protracted inquiry at Ross into some byelaws which had been made by the Conservators of the river. The Report on that inquiry has been already published, and it is not, therefore, necessary that I should refer to the subject of it in more detail now. But the inquiry afforded an ample opportunity for investigating the results of amended legislation on the Wye. The results were plain. It was proved, beyond the possibility of dispute, that there had been a marked decrease of "botchers" in the upper waters, and that there had also been a decrease of clean fish, of spawning fish, and of fry in these waters. It was proved with equal distinctness that the preservation of kelts had had the effect of increasing the average weight of fish in the middle and lower waters; but it was not proved that there had been any increase in their numbers. It is impossible to conceive a more unsatisfactory result of 14 years' protection under improved legislation. Other rivers with far less natural advantages than the Wye, with waters which are more polluted and less free from obstruction, have shown annual and progressive improvement. The Wye alone, among our principal rivers, shows no improvement at all, and the difference which it offers in this respect is

* Report, 1861, p. viii. † Inspectors' 1st Report, p. 8.
‡ Inspectors' 2nd Report, p. 30.

surely deserving of attention. It is of course impossible for anyone to state positively the causes which are leading to the non-improvement of a fishery. But the Wye has one characteristic about it from which every other river in the country is free. It has many more miles of fresh water which are regularly netted than any other river with which I am acquainted. When the solitary instance of retrogression is afforded by the river which is netted for the longest portion of its course, it is fair to presume that the failure of the fishery has some connection with the over-netting.

THE TEES.

The Tees, a river rising in the high range of hills which forms a backbone to northern England, and falling into the sea near Hartlepool, is 79 miles in length, and drains a catchment basin of 708 square miles. It is about equal in size and in natural capabilities to the Usk, and under fair treatment might become at least as productive as that river. The Tees, however, has never enjoyed fair treatment. Lead mines on the upper waters pollute it; the sewage of Darlington, of Stockton, of Middlesbro', and other places is poured into it. Millions of gallons of water are pumped from it for the supply of these towns; a weir at Dinsdale blocks the river, and nine other dams form greater or less obstructions between Dinsdale and Barnard Castle. Nor does this statement, serious as it is, exhaust the difficulties which existed on the river before 1861. At the majority of the dams the fish were not merely detained, they were also caught. Stake nets were fixed on either side of the entrance of the river; every device was used which the ingenuity of man could suggest for the capture of the fish, and the magistrates, with a short-sighted policy, extended the legal fishing season to the 17th September.

The Acts of 1861 and 1865 remedied many of these evils. The stake nets, all of modern creation, became illegal and were abandoned. The majority of the millowners voluntarily gave up their fish-traps. The decisions of the Special Commissioners compelled the disuse of the others. But, though the evils were thus modified, they were not wholly cured. The Tees is still polluted by lead mines at its source, and by the refuse of Stockton, Middlesbro', and Darlington. Dinsdale dam, though much improved by the addition of a fish pass, still constitutes a serious obstruction; while water is still abstracted for the supply of Middlesbro', Stockton, Hartlepool, and the adjoining places; and the abstraction becomes more serious as the population of these very populous towns becomes larger.

Notwithstanding these facts, however, the Tees has made great progress. An application was made to us last year to extend the open season to the 14th September, and the inquiry which took place upon it, enabled us to test decisively the progress of the river. The first witness who came before us had kept a record of his take for many years. From this record it appeared that, during the 11 years which preceded the Act of 1861, and including 1861, the witness, fishing up to

the 17th September, had taken in the aggregate 520 salmon and grilse, or an average of $47\frac{3}{11}$ a year; while during the last 11 years of which he had a record, the same witness, fishing during the shorter season, had taken in the aggregate 801 salmon and grilse, or an average of $72\frac{9}{11}$ a year. The shorter open season had, in other words, produced nearly 70 per cent. more fish than the longer one, a plain proof of the expediency of closing the river at the end of August. This evidence was corroborated by other witnesses. A fishery, for instance, for which 7*l.* was paid in 1861, is now let for 20*l.*; a fishery, for which 1*l.* was paid then, is now let for 12*l.*

THE TOWY. The Towy fishery district includes the group of rivers which fall into Carmarthen bay. The principal of these are the Taf, the Towy, the Gwendraeth and the Llwchyr, and the chief of these is the Towy. The Towy is a river of considerable importance. It is 58 miles long and drains an area of 514 square miles; its principal tributary, the Cothi, is 27 miles in length. Before 1861 the close season on these rivers did not commence till the 1st November. Poaching, indiscriminate and undisguised, was openly practised, and the river had no chance of improving. The new law failed in the first instance to remedy the evil. "When we were at Carmarthen in the latter end of September last," wrote my predecessors in 1862, "we were told "that the coracles fished every night, and that the fruits of the night's labour were hawked about the town and openly sold in the day. The borough police did not interfere, no one interfered; and if an offender was prosecuted it was difficult to obtain a conviction, and when obtained a nominal fine was inflicted."* The difficulty of dealing with the matter was certainly considerable. "Every man living on the banks of these rivers," wrote my predecessors in the Report from which I have already quoted "has a coracle . . . .

"Perfectly portable, the coracles are put into the river at the head of the pool containing the fish, and it is swept again and again, if necessary, until he is caught. To a poacher they are invaluable. Working without noise, and at night scarcely visible, they are difficult to detect; and if detected, almost impossible to capture, for a few strokes of the paddle will always place the river between the poacher and his pursuer. The coracle man is often lawless, and always aggressive; he poaches private water for years, and claims a prescriptive right; he uses violence if he be very strong, he threatens if his opponent be not so much weaker than himself as to make violence safe. A man of some property in this part of the country told us that they had encroached upon his water and taken possession of it; that he did not dare to interfere, for they would burn his stacks. This year, on the Towy, they went in a body to Ferryside, where the long-net men mostly live, attacked the men and destroyed their nets. A complaint was made, we were told, of this outrage to the magistrate's clerk, but that it went no further. The evil is at present grave, but we believe that it would at once, and with ease, be suppressed, if resolutely met."†

The Conservators, on their first appointment, dealt with the matter tentatively. They imposed a license duty, but the duty was very low. In 1867 and 1868 only 1*l.* was charged for a

* Inspectors' 2nd Report, p. 23. † *Ibid* p. 22.

coracle net, only 10*s.* for a hand net, 2*l.* 10*s.* for a draft net, and 10*s.* for a rod. In 1869 the duty was raised to 15*s.* for a hand net, 3*l.* 15*s.* for a draft net, and 1*l.* for a rod; the coracle net being still left at only 1*l.* In the following season, 1870, the coracle net license was raised to 1*l.* 10*s.*, while, in the middle of 1871, the duty was raised to the maximum admissible at that time, viz., to 2*l.* for a coracle net, 1*l.* for a hand net, 5*l.* for a draft net, and 1*l.* for a rod and line. The effect of these changes is worth observing. The net fishermen were reduced from 221 in 1868, to 194 in 1869, to 173 in 1870, to 159 in 1871, to 146 in 1872, and to 137 in 1873; but the revenue at the Conservators' disposal rose from 124*l.* 10*s.* in 1868 to 167*l.* in 1873. In 1874, however, the beneficial effects of this policy were visible; the number of net fishermen increased from 137 to 200, while the rods increased from 84 in 1868, and 69 in 1869, to 110 in 1874. These figures show, probably more clearly than would be possible in any other way, the improvement which has taken place. Salutary restrictions led, in the first instance, to a reduced fishing; reduced fishing resulted in an increased stock; and an increased stock, in its turn, added to the number both of net fishermen and anglers. The moral in this and in every other similar case I believe to be plain. The only method of increasing the production of a river free from obstruction and pollution is to impose well-considered restrictions on the net fisheries.

There is the best reason for believing that the improvement which has taken place on the Towy will be maintained. Up to within the last few months a perpendicular weir near the mouth of the Cothi presented a considerable obstruction to the passage of fish up this tributary. During last summer this barrier was purchased and pulled down. The most important breeding tributary of the Towy is thus entirely opened to the fish, which have an uninterrupted access at all times to their spawning ground. This result must be attended with the best consequences to anglers on the Cothi. The experience both of the Tyne and the Usk justifies the belief that it will also be followed with the best results to the net fishermen in the estuary.

The Dee enjoys natural advantages which are shared by few of our English rivers. The broad estuary into which it flows is an admirable feeding ground for the fish. The great lake of Bala, which is situated near its source, equalises the flow of its stream. The main river itself and its tributaries, the Lliw, the Twrch, the Twymyn, and the Alwen, have an abundance of excellent spawning ground. The natural advantages which the Dee thus enjoys had even in 1861 saved its fisheries from the fate which had overtaken the majority of our English rivers. My predecessors in their earliest reports admitted that a large number of men were dependent on the salmon fishing, and the application of a considerable amount of labour to this industry pointed to the existence of a large stock of fish. Illegal fishing, however, existed in every part of the river, and no authority had either the means or the power to cope with it and with the other difficulties which

THE DEE.

were gradually destroying the Dee. Fixed nets, in defiance of all law, bristled in the estuary; the draft-net fishermen failed to observe the close seasons; weirs unprovided with fish-passes blocked the river; poachers drove a thriving trade by snatching fish. The natural excellence of the Dee alone retarded the downfall which must otherwise have occurred.

Since the Act of 1861 considerable progress has been made. The fixed nets have become illegal and have been swept away. Passes have been built (with the best results) at Erbistock and Llangollen weirs, and with perhaps less success, but nevertheless with advantage, at Pentrefellyn. An admirable grating protects the intake of the Shropshire Union Canal lade at Llantisilio, and an active Board has extended a real protection to the spawning fish. But, though the best consequences have ensued, and salmon in the Dee are annually increasing, the river still has its difficulties which it is useless to ignore. The removal of the stake nets has imparted fresh vigour to the operations of the draft-net fishermen. They unwisely imagine that the Conservators, who are really promoting their interests, are bent on interfering with their industry; and, in lieu of assisting the Conservators to put down illegitimate fishing, they pass their licenses from hand to hand, and thus make one license do the work of two, and limit the revenue which should be available for protection. The matter is the more serious as the funds which are at the disposal of the Conservators are far from sufficient. The Conservators began the year with a deficit of 171*l.*; they are closing it with a balance of 301*l.* on the wrong side of the account. No doubt this state of things should not have been permitted to have arisen. Nothing can justify excessive expenditure of this kind, and, however necessary it may seem at the time, it must ultimately fetter the operations of the Board. But, if the Conservators have in this respect been probably unwise, they have erred with good intentions. Their income is insufficient for the *bonâ fide* purposes of protection, and they have had to choose between a high expenditure and an excess of poaching. The Wye Board, with 509*l.* a year, find themselves seriously hampered for want of funds; the Dee Board, with only 364*l.* a year, are crippled for the same reason.

There is another difficulty on the Dee which requires attention. The river and its tributaries are seriously polluted. The sewage of Chester is poured into the estuary; a large tannery inflicts considerable injury; and the petroleum works at Saltney are a source of danger. The Alyn again is polluted by petroleum and paper works, and this valuable tributary is in consequence rendered useless as a breeding stream. The Dee then is one more instance of the necessity for a Pollution Bill. Its fisheries can never be in a really satisfactory condition till this remedy is afforded by the Legislature.

THE LUNE.

The Lune, like the Dee, has very great natural advantages. Rising in Crossfell and falling into Morecambe Bay, it is 42 miles long, and has a catchment basin of 418 square miles. The

Lune, then, is a smaller river than any of those to which I have hitherto referred in this Report. But it is not materially smaller than the Ribble; it is free from the pollutions which are destroying the latter river; it has equal physical advantages; and it might, under certain circumstances, have occupied an equally prominent position in this review. The history of the Lune before 1861 was identical with the histories of the majority of our English rivers. The river was overfished in the tideway; "up "the river there was a regular 'pink season,' during which rod "fishermen collected, for the purpose of their capture; 10 lbs.' "weight were often taken, and 15 lbs. not uncommonly, by a "single rod. In addition, nets were used at the head races, and "at the sluices of the mills, and on the shallows, and the smolts "were captured in thousands."*

The natural consequences, of course, ensued; the river became less and less valuable, and nothing but its natural capabilities saved it from utter ruin. Happily the Acts of 1861 and 1865 remedied this state of things. Illegal fishing was checked, and the river, regularly preserved, began to improve. The improvement which has taken place may perhaps be accurately shown by contrasting the revenue received from licenses in 1867, the first year of which there is any record of it, with that received in 1874. In 1867, 1 baulk net, 9 draft nets, and 34 haaf nets, gave employment to 71 men, and contributed 123*l.* to the preservation of the river. In 1874, 1 baulk net, 20 hang or draft nets, and 36 haaf nets were licensed, employing 87 men, and yielding a revenue of 218*l.* The rods in the same period have increased from 55 to 81.

Though, however, a considerable improvement has taken place, the position of the Lune is still far from satisfactory. The Royal Commission of 1860 found that the lower reaches of the river were blocked by three stone weirs, all of them considerable obstructions to fish. I regret to say that the lower portion of the river is still blocked by the same weirs, which are still considerable obstructions. Passes have, indeed, been built at Skerton, the lowest of the three. But, if the passes were much more efficient than I believe them to be, my opinion would not be altered. The "up" fish are checked by the existence of these three obstacles, and if they pass them are tempted to remain in the deep pools above them. The kelts and the smolts, again, are detained in the river above these dams, for an unnaturally long period. The Lune, under these circumstances, can never be as productive as it might otherwise become until the condition of these weirs is materially altered. The Tyne has been made the most productive of English rivers by the destruction of two weirs and the erection of efficient passes at others. By a precisely similar policy, the Conservators of the Usk have made their river the most productive of English angling waters. Both these instances may be quoted to prove that amended laws are only of use when they are supplemented by active operations; both of them may be cited as illustrating the policy which

* Inspectors' 2nd Report, p. 11.

it is the duty of Conservators to adopt. The Lune has natural advantages as great as those which are enjoyed by the Usk and the Tyne. It only requires similar treatment to display similar results.

THE TAW AND TORRIDGE.

The Taw and Torridge are the two principal rivers in the north of Devonshire. The Taw is 49 miles in length, and drains an area of 455 square miles. The Torridge is 52 miles long, and has a catchment basin of 355 square miles. The two rivers, both of which have considerable natural capabilities, unite in a common estuary near Bideford. The principal tributaries of the Taw are the Little Dart and the Mole; the principal tributary of the Torridge is the Okement. The Taw is obstructed by a fishing mill dam at Umberleigh, and by weirs at Brightley, Collaton, Rashleigh, Eggesford, and Brushford. The Torridge is obstructed by Beam weir, Torrington Canal weir, and weirs at Beaford and Dolton. The Mole is obstructed by weirs at Meeth and Clappery, and salmon are entirely excluded from the Okement by an impassable weir at Monk Okehampton.

Nor does this enumeration of obstructions represent the whole difficulties which had to be remedied in 1861. Traps were used at nearly all the mills. The traps were "*openly* used for taking kelts,"* and the fishing season was improvidently extended to the 20th October. The Acts of 1861 and 1865 remedied most of these evils. An extended close season insured a larger breeding stock; illegal traps were everywhere removed; the traffic in kelts was put down; Umberleigh weir was provided with a pass; and a pass was also attached to the Torrington Canal weir. These measures have admittedly increased the breeding stock. A slight extension of the open season for nets and rods will now enable the fishermen to derive some advantage from the increase; while a proposal, which is now before us, to open out the Okement, the finest breeding tributary of the Torridge, will, if it be efficiently carried out, lead to the further development of the fisheries of the district.

THE TEIFI.

The Teifi Board of Conservators are charged with the protection of a group of rivers in the south-west corner of Wales. These are the Arth, flowing into the sea a short distance to the north of Aberayron; the Ayron, which gives its name to that town; the Teifi, whose mouth is at Cardigan; the Nevern at Newport; and the Gwaun at Fishguard. The Teifi is the most important of these rivers. From its source at Plinlimmon to the sea it is 70 miles long, and drains an area of 389 square miles. The Teifi has always been recognised as one of the most important rivers in Wales. Its salmon are supposed to be peculiarly abundant and excellent in flavour. The Royal Commissioners of 1860 were assured that the aggregate annual value of salmon caught in the Teifi amounted to 3,000*l.* a year (Qu. 5045 and 5065), and this information was subsequently embodied by my predecessors in their 1st Report (p. 28). The difficulties on the

* Inspectors' 1st Report, p. 23.

Teifi at that time were not very numerous. A natural fall at Cenarth, and a weir at Newcastle Emlyn formed considerable obstructions to fish; but a greater difficulty was presented by the refuse of the slate quarries at Cilgerran, which had been allowed to be tilted into the stream. Lead mines near the source of the river, which were not, however, worked with much activity, threatened also the possibility of pollution. These difficulties practically remain unabated. Attempts are still made from time to time to reopen the old lead workings; the weir at Newcastle still obstructs gravid fish; the fall at Cenarth still exists in the shape in which it has stood for centuries, though an application is now before us to sanction the construction of a fish pass in connexion with it, and slates are still tipped into the river at Cilgerran, the débris of which at low water still blocks the entire channel of the river.

None of these difficulties, then, have been remedied since 1861, but in other respects the river is better situated. Up to 1861 the shot fawr, a long draft net, used to be fixed across the mouth of the river at every ebb tide. Since then the shot fawr has been held to be a fixed engine, but the men evade the law, and fish it practically in the same way as before. As it is illegal to fix it to the shore, gangs of men hold it at both ends, and thus, though the net cannot perhaps technically be said to be fixed, the river is as completely blocked as under the old system. Up to 1861, too, the fishing season extended to the end of October: fixed nets, "jackass nets," as they were called, were placed at every convenient place between Cenarth and the tideway; a cloud of coracles continuously fished the same waters, while "spears and lights" were "in active operation on the spawning beds, and a wholesale capture of fish for sale" was "systematically practised."* These evils have been partly put down. The close season has been altered, and October and November closed. Kelts are no longer openly sold; spears and lights are no longer in active operation; the jackass nets, though still used by poachers, are no longer legal, and are consequently seized and confiscated wherever they are discovered.

The strongest proof that, under these circumstances, the river is improving, may be found from the testimony of the net fishermen. They resisted, in the first instance, to the utmost of their ability the operation of the new law. September and October were the most productive months. September and October were taken away from them. But at the present time the most intelligent among them are unanimous in thinking that they have derived advantage from the operation of the new Acts. A net fishermen at Newport said to me, a year and a half ago, that "he "would rather pay 20*l.* license duty, and have the law as it is, than "the old law with no preservation and no license;" while the captain of a net at St. Dogmaels, a village at the mouth of the

* Inspectors' 1st Report, p. 28.

Teifi, while pointing out to me the defects in the law as it then stood, admitted that "the Board had done good, and that the license duty had done good."

Much, however, still remains to be done before the Teifi will be in a thoroughly satisfactory condition. Indiscriminate poaching, pursued for generations, cannot be put down in a limited period. But the fishermen are at last recognising the great fact that the Salmon Acts are passed in their interests, and not in opposition to them. They are consequently becoming better reconciled to the provisions of a law which in the first instance they blindly resisted. The Teifi, under these circumstances, is happily, slowly but steadily progressing. One of the smallest of the rivers which has been hitherto noticed in this review, it is probably already more productive than many of those which have taken precedence of it in this report.

YORKSHIRE.

There is something melancholy in turning from the rivers whose circumstances have been already reviewed to the great watershed which it is now my duty to notice. The estuary of the Humber receives the united waters of the Ouse and of the Trent, each of these great affluents draining about 4,000 square miles of country, or in the aggregate about one seventh of England and Wales. Of the Trent it will be my duty to speak later on in this Report. Of the Ouse and its tributaries it can only be said that their condition in 1860 was miserable, and that, hough a slight improvement has undoubtedly taken place, it is miserable still. Nor can the Conservators be blamed for this state of things. With 4,000 miles of country to protect they have a gross revenue of 238*l.* a year. A revenue of ten times that amount would barely be sufficient for the purpose; a revenue of 238*l.* is absolutely inadequate. The Ouse is made up of eight great tributaries, the Don, the Aire, the Calder, the Wharfe, the Ure, the Nidd, the Swale, and the Derwent. Three of these affluents may, however, at once be dismissed. The Don is not a salmon river, and the Aire and the Calder, the subjects of a separate report from the Pollution Commissioners, are two of the most polluted rivers in the country. The other five affluents, however, the Wharfe, the Ure, the Nidd, the Swale, and the Derwent, are rivers of importance. "They embrace," as my predecessors wrote in 1863, "an area of very large dimensions, and in general admi- "rably adapted for the cultivation of salmon, and they are in "great proportion free from the impurities which have operated in "other waters;" yet "they furnish an instance of wasteful "neglect, surpassing in extent, perhaps, any other which could be "found in England."* "The waste in this case," wrote Mr. Eden, in the last and best of his admirable reports, "is so great that "I cannot but digress a moment in order to call attention "to it . . . ."

"The rivers falling into the Humber drain an area of 9,408 square miles. The Shannon un-waters 4,544 square miles; the Tay, 2,513. Nothing is more

* Inspectors' 2nd Report, p. 46.

difficult than to obtain an account of the quantity of fish taken in any river, but we know that the rents of the Tay in the past year have exceeded 15,000*l.*; and there is good reason to believe that it produced at the very least 35,000*l.* worth of salmon in the season. From the Shannon we know that the railways carried 262 tons of salmon during last season, in addition to the amount consumed in the district, or sent by other conveyance. But in Yorkshire it is a matter of congratulation, and the occurrence was mentioned to me as a proof of the improvement of the fisheries, that the gross number of 177 salmon were caught this year in five of the most valuable of its fisheries."*

The state of things has happily materially improved since Mr. Eden's report. The Conservators assure us that 3,680 salmon and 289 migratory trout were taken within this district during the last season. The take was immensely larger than that of any previous year, and is exceptionally satisfactory because the season of 1874 has not been a good one on the east coast of England generally. But a harvest of 4,000 fish is an insignificant yield for rivers draining 4,000 square miles of territory. The yield appears the more insignificant if it be remembered that the Tyne has only a quarter this watershed, and that the reduction of the take on the Tyne to 25,000 fish is exciting regret and alarm. The improvement which has already occurred in Yorkshire is no doubt considerable. But the harvest of the Yorkshire rivers must be increased twenty fold before their condition can be considered satisfactory.

The reasons which have interfered with the productiveness of these rivers may be very briefly explained. A serious obstruction, built for the purposes of navigation, blocks the Ouse a few miles below York, and three of the five affluents of the Ouse flow into it above that point. The two others, the Wharfe and the Derwent, enter it respectively from the west and from the north. The Wharfe is obstructed by dams at Tadcaster, Thorp Arch, Flint, Wetherby, Harewood, and other places. It is polluted with the refuse of the large and increasing town of Otley, and its water is diverted in large quantities for the supply of Leeds. Under such circumstances it is undoubtedly difficult to do much, yet something has been done. Passes, to which I have alluded in my previous reports, were erected under the designs of the late Special Commissioners at Tadcaster and Wetherby. A pass has been attached to the Harewood Bridge dam, and passes are being also erected at Thorp Arch and Flint. The condition of the Derwent is less hopeful. Two singularly formidable barriers at Sutton and Stamford Bridge effectually block the river except in high floods. Before the present year the Derwent was placed under a separate Board. But it and the other rivers of the district have now been placed under the same Board. It is hoped that by this means the rivers may be managed with more economy and more efficiency.

So much for the two rivers whose mouths are below Naburn. There is no obstacle on the Ouse between Naburn and Linton, and the Nidd joins the Ouse below Linton. The Nidd in its turn,

* Inspectors' 4th Report, pp. 21–22.

however, is obstructed by weirs at Kirk Hammerton, Goldsboro', and Knaresboro'. Linton dam, which blocks the Ouse itself, and its affluents the Ure and the Swale, is a much more formidable barrier. A pass was attached to it many years ago under the supervision of the late Mr. Ffennell. Mr. Ffennell's instructions were, however, only partly complied with; the pass proved a failure; and the discouragement which arose from a fruitless expenditure imposed new difficulties on the Conservators of Yorkshire. During the last few months, however, a movement has again been set on foot for dealing with this formidable obstruction; and in every probability a new pass will shortly be attached to it. The construction of an adequate pass at Linton will to a certain extent open up the Ure and the Swale. The Swale, the least important of the two affluents, is, however, again blocked at Topcliffe and Richmond. The Ure, a river of the very highest capacity, is obstructed by dams at Boroughbridge, Westwick, Mickley, Masham, and Tanfield. The chief difficulty will, however, have been surmounted if only Boroughbridge and Linton are made passable. The Conservators deserve credit for persevering in the matter.

THE KENT.

The Kent fishery district includes an important group of rivers which drain the north-western corner of Lancashire and a large portion of Westmoreland. The most important of these are the Duddon, the Leven, the Crake, the Bela, and the Kent, which gives its name to the district. The story of these rivers up to 1861 was very simple. "The Duddon," said my predecessors in 1863, "27 miles in length, bears deservedly a high name "amongst the lesser Cumberland rivers . . . . About 16 or 17 "years ago four draft nets were worked there, by three to four "men to each net, and they and their families lived by salmon and "salmon kind. The Scotchmen then came and the fishing fell "off. They set up stake nets, having a small herring mesh at "the lower part of the net, and they caught salmon and sea "trout, herrings, and flukes, till they banished the lot." "The "tide," they went on, "ebbs for some miles at that portion of "Morecambe Bay into which the Kent and its tributaries . . . . "flow, leaving dry a long stretch of sands, through which the "river winds its course. The nature of this flat gives much "facility for the use of lift-nets, a net fixed across the channel of "the river, which, lifting with flood tide permits the upward "passage of the fish, and, falling with the ebb, prevents their "return to sea. As many as 26 of these nets have been worked "at one time in and about the mouth of the Kent . . . . The "fisheries have so decreased here, however, that but few of the "lift nets are now used . . . . Draft nets and baulks were also "used in the public portion of the tidal waters of the Kent. The "use of draft nets is abandoned . . . . The Leven . . . . previously to the passing of the Salmon Fishery Act, was nearly "fished out by a fishing weir at Lowwood. Few if any salmon "escaped the cruive at this barrier, which was worked until "October 10th of each year, and the value of the fishery rapidly

"diminished in consequence."* Nor was overfishing, serious as it was, the only cause which was destroying these rivers. The Kent was obstructed by a natural fall at Whitewater, and by weir at Bassin Ghyll, Sedgwick, Helsington, and Kendal; the Bela was blocked by an impassable weir a short distance above the tideway, and four weirs, all within a short distance of each other, obstructed the Leven. These difficulties have been partly remedied. The fixed engines have, nearly without exception, been declared illegal and abolished. The natural fall on the Kent has been made passable. Several weirs on that river have been improved, and the dams on the Leven have been made passable. As a consequence the stock of fish in these rivers, and the amount of license duty paid to the Board for the right to catch them, have been steadily and progressively increasing.

The Leven is undoubtedly the largest and most important river in the district. It is the direct outlet of Windermere, the largest of English lakes, and it is also connected through its tributaries with three other lakes, Rydal, Grasmere, and Ulleswater. When I first inspected the Leven, in the spring of 1868, four weirs, all of them usually impassable, kept the fish out of Windermere. No salmon had ever been taken in that lake, and it was supposed that no salmon could ever be caught there. I suggested simple and inexpensive means by which it seemed to me that the three principal of these four weirs might be made more passable. The Conservators were good enough to carry out my suggestions, and though in the following winter they were unable to speak decisively of the results, they stated that "the upper streams and "breeding grounds had been full of fish, and that there can be "little doubt that this was in some measure due to the improve-"ment of the weirs."† The expectations which were thus formed were not disappointed. I was glad to learn, on the occasion of a visit paid to the Leven in the spring of 1871, that the inexpensive passes had answered every purpose. "One of the best things out "is yon," said the water bailiff to me, pointing to the diagonal board which had been placed on the dam at Lowwood at a cost of only 8*l*. That the water bailiff's opinion was not ill founded may be gathered from the circumstance that 15 or 16 fish have been taken in Windermere with the rod, so there is at last some prospect of its becoming an angling lake. Since that time the progress which had thus commenced has steadily been maintained. The income of the Board is slowly increasing, having risen from 174*l*. in 1873 to 194*l*. in 1874; the powers of the Conservators for good are thus augmented; and there is every reason to hope that these rivers, so naturally well adapted for salmon, may become more and more productive.

THE DART.

The Dart is a comparatively small river. It is only 35 miles long, and drains a catchment basin of only 200 square miles. But, from its source on Dartmoor to its mouth at Dartmouth, it is admirably adapted for the production of migratory salmonidæ,

* Inspectors' 2nd Report, pp. 8–10.] † Inspectors' 8th Report, p. 84.

and has always, in consequence, been known as one of the most important of Devonshire rivers. But its history has unfortunately been similar to that of many other rivers. "Its fisheries," wrote my predecessors in 1863, "have, in common with the others of "Devonshire, decreased in value from year to year. One fishery "below, partly worked by a fishing mill dam, at the tidal limit, "has allowed no fish to reach the upper waters when in condi- "tion, and the upper proprietors have had, consequently, no "interest in protecting the river, and the fish, when invaluable as "breeders and valueless for food, have been left to the spears of "the poachers."* The evil, which this dam unquestionably occasioned, was intensified by another circumstance. Fishing continued till the 14th of November in each year, and was resumed on the 15th February. The entire river, in other words, for nine months out of every twelve, was placed at the mercy of a single proprietor.

The Act of 1861 did not immediately remedy this state of things. The close season was indeed better adapted to the circumstances of the river, and fishing-mill dams became theoretically illegal. But the proprietors of the dam, who were trustees of the charities of Totnes, doubted the applicability of the statute to their own case, and went on fishing as before. It was not for some years after 1861 that the appointment of conservators constituted a body with power and ability to enforce the law. About the same time a high flood washed away a portion of the objectionable dam, and "the salmon were enabled to pass to their spawning ground "easier."† The effect of these two things soon became visible. 7,000 salmon were taken by net in the summer of 1870—an enormous increase over any previous year; there was a further increase in 1871, and again in 1872; and the license duty, which in 1869 only amounted to 102*l.* 17*s.* 6*d.*, gradually rose till it reached to 167*l.* 16*s.* 6*d.* in 1874.

It is doubtful, however, whether the improvement which has taken place will continue. Since 1867 Totnes weir has been more than once partially repaired, and more than once again partially thrown down by floods. The repairs have left it in a more difficult condition than ever. Plans have been arranged for a pass, but the pass, for some reason or other, has never been constructed; and the Dart which, up to a certain point, was the most improved and most improving of our smaller rivers, again threatens to go back. Nor is Totnes weir the only difficulty which the fish have to face. In addition to this obstruction there are weirs at Stafferton, Stafferton Bridge, Buckfastleigh, and Buckfast Abbey; while mines have unfortunately been opened on the head waters on Dartmoor. When I add that, on the occasion of my last visit to the river, the water at Totnes was stained with the refuse from these mines, the intensity of the danger to which the fisheries of the Dart are at the present moment exposed will be apparent.

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* Inspectors' 2nd Report, p. 39. † Inspectors' 7th Report, p. 112.

The Coquet is at the extreme north, the Dart at the extreme south, of England; but the two rivers are almost equal in point of size and physical capabilities. The Coquet, which flows into the sea near Warkworth Castle, is 40 miles in length, and drains about 244 square miles of land. The Coquet, like the Dart, is considerably obstructed by mill dams. A fishing mill dam at Warkworth stops the fish at the very head of the tideway, and dams at Morrick, Acklington, Guisnes, and Felton, form also considerable obstacles. The three most serious of these obstacles have, however, been provided with passes, and the barriers which they constitute, though far from being removed, has in this way been unquestionably lessened. THE COQUET.

The Coquet soon improved under the legislation of 1861. "The withdrawal of stake nets from the Northumberland shores," wrote my predecessors in 1863, "caused an immediate increase of "fish in the Coquet; and we were very glad to find that this has "much stimulated the upper people."* Unfortunately, however, experience proved that the fish which came up were bull trout and not salmon. The bull trout will not usually take a fly; they are less valuable than salmon; and the anglers consequently lost heart. The Duke of Northumberland, the principal proprietor of the river, imagined that, if the law were suspended for two or three years and true salmon artificially bred in the interval, the bull trout might be destroyed and replaced with the superior fish. The Secretary of State considered that the experiment which his Grace was desirous of making should be instituted, and leave was consequently given for that purpose. During 1868 and the four succeeding years, the close season was altered with this object and fishing was allowed to continue throughout 11 months of the 12, or from the 1st February to the 31st December. It was found, however, at the conclusion of the five years that the experiment had failed. The bull trout had not been destroyed and the true salmon had not returned to the river. Acting on the advice of my colleague and myself, the Secretary of State refused to allow the experiment to be continued any longer.

The gross number of fish taken during these five years was:—

	Salmon.	Grilse.	Bull Trout.
1868	13	28	28,107
1869	12	12	17,211
1870	21	3	11,457
1871	—	—	13,622
1872	—	—	13,622†

This statement proves, I think conclusively, first, that it would be almost impossible to convert the Coquet into a salmon river; and, second, that it requires more than five years of over fishing

* Inspectors' 2nd Report, p. 54.

† See Inspectors' 11th Report, pp. 8 and 9, and 12th Report, p. 126, where the number of bull trout taken in 1872 is said to have been about the same as that taken in 1871. The number of salmon and grilse is not given for 1871 and 1872.

absolutely to destroy a river of this description. Hard fishing during five years, for 11 months a year, with the weekly close season observed, reduced the stock of the river by little more than one half. The same process carried on for another five years would probably destroy it altogether.

But can it be desirable to destroy the bull trout when there is no apparent prospect of restoring the true salmon? The trout, though a less valuable fish than salmon, are valuable as articles of food. Their average price at Berwick-on-Tweed is higher than that of grilse, and only 1*d.* or 2*d.* a pound lower than that of salmon. The production of bull trout is therefore in itself a desirable object, and the Conservators must, I think, be prepared to give up all hope of converting the Coquet into a salmon river.

This decision, however, involved the consideration of another subject. If bull trout were to be considered the only fish which the Coquet could produce, it was necessary to adapt the close season to their capture. During the four years 1868 to 1871 the fish had been caught as follows:—

	1868.	1869.	1870.	1871.
Between 1st Feb. and 31st Aug.-	1,757	1,747	770	4,434
,, 1st Sept. and 31st Dec.-	26,350	15,464	10,687	9,188

The experience of the first three years seemed to show that it was impossible to catch a fair portion of the fish in the river between February and August; but 1868, 1869, 1870, were years of exceptional drought. 1871 was a wet year, and this state of things was immediately altered. Nearly one third of the entire take was captured between February and August. I was not, therefore, personally inclined to pay much attention to the statistics of the three previous years, and I positively refused to be in any way a party to extending the open season to the end of October, as the Conservators desired. Such a result would, I believe, in the long run have proved fatal to the Coquet itself; it would have caused considerable inconvenience to the neighbouring rivers, the Tweed and the Tyne. The Tweed open season extended, indeed, to the 15th September; and to this date, and to this date only, I consented to go. My suggestion has since been adopted by the Conservators, and the close season of the Coquet has been modified accordingly.

THE DOVEY.

The Dovey fishery district comprises a group of small but valuable rivers flowing into Cardigan Bay. There are the Glaslyn, the Dwyryd, the Mawddach, the Wnion, the Dysinni, and the Dovey. All of these rivers have very great capabilities for the production of salmon, and all of them do produce a considerable number of fish. The Dovey is the principal river of the district to which it gives its name. It is 19 miles long, and has a catchment basin of 215 square miles. "The natural "character of the Dovey," wrote my predecessors in 1863, "is per- "fect; it has a good fall, deep pools, strong streams, and abun- "dance of the finest spawning ground." Unfortunately," however, these advantages "have been negatived by the ignorant or care-

"less manner (careless, that is, of the interests of others) in "which a number of rivers draining into the Dovey have been "worked."* The state of things to which my predecessors referred unfortunately continued after my own appointment. When I was in Merionethshire, in August 1867, the first occasion on which I inspected the Dovey, fish were lying dead in the river, poisoned by pollutions, miles below the point at which the wash enters the river. Either the stagnation of the mining industry, or the energetic action of the Conservators, has since effected some improvement in this state of things. The pollutions, as a whole, are less serious than they were. "The number of salmon taken by nets has," probably in consequence, "almost exactly doubled."† But the produce of the Dovey must always depend on the powers which the Conservators may possess to stop all serious cases of pollution. It can never be in a satisfactory condition till some adequate steps are taken by the Legislature to prevent the pollution of rivers.

THE CLWYD AND ELWY.

The Clwyd and Elwy, which unite about four miles from the sea, into which they discharge at Rhyl, are respectively 18 and 25 miles long, and drain a catchment basin of 319 square miles. Of the two rivers the Elwy is the more adapted for salmon, and has always produced a fair number of these fish. Before 1861 the close season on these rivers nominally extended to the end of September. But the close season practically was never observed at all.

"The past fishing season," wrote my predecessors in 1863,—

"has been bad both in the tidal and fresh water; during the close season, however, the fisheries have been more profitable; and we heard of one haul, made on the 23rd or 24th of October, at which nearly 30 fish were taken, one weighing upwards of 20 lbs., the others from 6 lbs. to 10 lbs. each. We need scarcely say that where the breeding stock of the rivers is thus taken, the fisheries must decline, and that they will be taken unless protected. Funds, however, cannot be, or are not found for the purpose. The chief constable of the county is the Conservator of the rivers, and gives them through his force such care as he can, without unduly interfering with the other duties of his men; but this amount of protection is altogether inadequate; it may keep the breed alive: but cannot allow the river to become productive."‡

The imposition of a licence duty remedied this defect. Funds were obtained by the issue of licences, and the Conservators now enjoy a revenue (which, however, is hardly adequate) of 176*l.* a year. The increased preservation which they have in consequence been able to afford has had the usual effect of improving the fisheries. "We know," wrote the Conservators of the season of 1871, "of 550 fish caught with nets, and probably one third more "have been taken."§ "No account of fish taken by nets has been "kept," they reported in 1873,‖ "but it is admitted to have been "the best season for the last 25 years."

THE TAMAR AND PLYM.

The Tamar fishery district includes a group of rivers which flow into the sea at or near Plymouth. The most important of

* Inspectors' 2nd Report, p. 19. † *Vide* Appendix, p.
‡ Inspectors' 2nd Report, p. 14. § Inspectors' 11th Report, p. 109.
‖ Inspectors' 13th Report, p. 109.

these are the Tamar, and its tributary, the Tavy; the Plym; and the Yealm. The Tamar is one of the largest rivers in Devonshire; it is 38 miles long and drains 385 square miles; its tributary, the Tavy, is 19 miles long and drains 85 square miles, while the Yealm and the Plym are 9 and 8 miles long respectively. The history of these rivers is very simple. The Tamar used to produce 2,000 salmon a year, but the opening of the Devon Great Consols Mine, and the simultaneous construction of a weir at Latchley, for mining purposes, practically destroyed it as a fishing river. The owners of the Devon Great Consols have, indeed, done much to remedy their pollutions, but other mines have also been opened on the river. The Tavy is in hardly a better condition; while the Plym, one of the very best sea-trout rivers in the country, is seriously injured by the refuse from some china clay works. Under these circumstances nothing but an Act to remedy the pollution of rivers can develope the fisheries of this district. The Conservators derive a revenue from rod licenses which are taken out by the inhabitants of Plymouth, and by this means are enabled to afford some protection, and to save the fisheries from becoming utterly exhausted.

THE SEIONT.

The Seiont fishery district comprises three small rivers, the Seiont, the Gwrfai and the Llynfi. The Seiont falls into the sea at Carnarvon, the Gwrfai three miles to the south of the Seiont, the Llynfi south of the Gwrfai. At the time of the passing of the Act of 1861 these rivers were of such little importance that they were not visited by the Royal Commissioners of 1860, and mention was made of them in my predecessors' First Report, while only a few lines were devoted to them in their Second Report. The Seiont was blocked by a couple of weirs; the Gwrfai by a natural fall. On the occasion of my first visit to these rivers in the summer of 1867, my colleague and I explained the manner in which these dams, and the fall, could be made passable to the fish. The measures which we recommended were adopted, and proved, I am glad to say, successful. The Conservators and their very active secretary, Mr. Manley, were encouraged to persevere in their efforts to prevent poaching. The stock of fish has in consequence been largely increased, and, for their size, the Seiont and the Gwrfai are doing at least as well as any rivers in the country.

THE DWYFACH.

The success which has attended the preservation of these rivers has induced the proprietors in the south of Carnarvonshire to place their streams under similar protection. The Soch, the Erch, the Dwyfach, and the Dwytawr are now all included in the Dwyfach fishery district. The Dwyfawr and Dwyfach, or "the greater and smaller Dovey," are the best of these rivers; they fall into a common estuary near Criccieth; their waters are unpolluted; there is no serious obstruction upon them; and, if poaching is put down and the law thoroughly observed, there is no reason why they should not prove as good fishing streams as the Seiont and the Gwrfai.

The Trent. The Trent is, with the exception of the Severn, the largest salmon river in England and Wales. The Severn is 158 miles long, and drains a catchment basin of 4,350 square miles. The Trent is 147 miles long, and drains 4,042 square miles of country. It has already been my duty to point out that the Severn, with a catchment basin four times as large as that of the Tyne, has only two-thirds of the revenue which the Conservators of the Tyne have at their disposal. The Trent, it is now my duty to add, with a catchment basin nearly equal to that of the Severn, has only one-sixth of the revenue which the Conservators of the Severn enjoy. The inadequacy of the revenue at the disposal of the Conservators of the Trent would alone account for the unproductive character of that river. Their resources are inadequate to provide satisfactory protection. Incomplete protection favours poaching; systematic poaching diminishes the production of the river; and a small produce, in its turn, reduces the licence revenue. Rivers in this position can only recover slowly, and there is another reason why the improvement of the Trent cannot be rapid. "The Trent," wrote my predecessors in 1863—

"flows through a flat country for a long distance; and in consequence does not possess the same proportion of spawning waters that would be found in a river of the same magnitude, with greater and more frequent falls; nevertheless, it would be erroneous to suppose that it cannot be made to yield a much larger produce than the wretched amount which is now taken in it. The Trent valley is flat, but there are portions of the Trent and its tributaries which possess all the natural qualities required to render that great watershed productive. We recently visited the lower parts of the river, and have ascertained, from sources which we believe may be relied on, that the whole produce of salmon in the tidal portion of it which extends 20 miles above Gainsborough, does not generally exceed the number of 40 clean fish per annum. There are not more than four or five nets employed from the Humber up to this point; they would not pay the expense of constant working; the men who use them have other occupations, and only seek for salmon at times when their long experience teaches them that there may be a chance, the decline has been progressive, and year after year fewer fish have been taken."*

This state of things at any rate exists no longer. The Conservators were able to report a slight increase in 1866 (Inspector's 6th Report, p. 58); that not less than 750 fish had been taken in 1867 (7th Report, p. 115); that about 1,200 were taken in 1868 (8th Report, p. 98); 1,100 in 1869 (9th Report, p. 95); and 2,000 in 1873 (13th Report, p. 125); and 2,000 in 1874 (*vide* Appendix.) The produce of the river is still small, but it is totally different from the condition which the Royal Commissioners of 1860 discovered, and my predecessors reported on later.

Still the difficulties on the Trent are great. The Derwent, naturally a fine tributary, is ruined by the sewage of Derby, and blocked by high and impassable weirs. A chemical factory, to which I alluded in my Tenth Report, has been opened at Stockwith, in the tidal water. A weir at Tutbury on the Dove is a serious barrier, and the gasworks at the same place occasionally pollute the stream. Notwithstanding the existence of these

* Inspectors' 2nd Report, p. 45.

difficulties, the conservators have succeeded in generally developing the fisheries. The river is now probably 50 times as productive as it was in 1861. Increased production will ultimately place a larger revenue at the disposal of the Conservators, and greater resources at their command will enable them to carry on, more actively than before, the work of preservation.

THE AVON AND ERME.

The Avon and the Erme are two small rivers, united in one district, flowing into the sea near Kingsbridge. The Avon before 1861 had the latest close season of any English river. The close season commenced on the 15th January and terminated on the 6th May. The alteration which was effected by the Act of 1861, and which fixed it from the 1st September to 2nd February, was therefore very great. It excited considerable dissatisfaction. Discontent was attended with serious consequences. Kelts have been killed in the spring both in the estuary and by rod fishermen, while spawning fish have been killed by hundreds every winter. The close season has now been again altered, and fishing will continue till the 21st September. It may be hoped that this alteration will induce a better feeling and lead to increased preservation. No river can be expected to improve which is subjected to the treatment which the Avon has experienced. The Erme, the companion river of the Avon, suffers from a very different cause. Its waters are polluted with the refuse of the town of Ivybridge. and by a very large paper mill and some other factories situated there. The water of the river is constantly in a state which must be injurious to the health of the neighbourhood, and which is certainly ruinous to the fisheries of the river. The Erme, naturally an excellent sea-trout river, can never prove productive till some stringent remedy against pollution is provided by Parliament.

THE AVON AND STOUR.

The Avon and Stour are two rivers of considerable volume which unite their waters at Christchurch in Hampshire. The Stour is the more muddy and stagnant river of the two. The Avon has always enjoyed a high reputation for the quality of its fish, and Christchurch salmon to this day command an exceptional price in the London market. The condition of these rivers in 1861 was lamentable. "So late as 1814," wrote my predecessors in their 2nd Report, "1,600 salmon were taken in the Knapp "weir, or Royalty fishery; in 1860, 68 were taken, number "of trout not known; in 1861, 58 salmon and about 250 trout; "in 1862, 73 salmon and about 60 trout."* The decline in the fisheries was easily accounted for. At the head of the tideway was a fishing mill dam, Knapp weir. The weir was constructed with hatches, and, when the hatches were drawn, hecks or gratings were placed in the hatchways to prevent the possibility of fish passing up the river. Above Knapp, a similar fishing mill dam, armed with similar contrivances, existed at Winkton, while between Winkton and Salisbury there were eight weirs, viz., at Ring-

* Inspectors' 2nd Report, p. 6.

wood, Ibbesley, Bickton, East Mill, Burgate, Breamore, Downton, and Trafalgar. The Act of 1861 has not, of course, remedied the whole of these evils. Ladders, some of which have proved partially successful, have been constructed at the majority of the weirs. But more good has been done by the provisions which have compelled the removal of the hecks at Knapp and Winkton during the annual and weekly close seasons. In lieu of the 68 salmon taken in 1860, 2,068 were taken in 1869, 2,760 in 1870, about 1,800 in 1871, 1,185 in 1872, and 1,155 in 1873. The figures are not entirely satisfactory. The decrease since 1870 shews that the improvement which was at first effected has not been continued. But the present take contrasts well with the limited production of the river in 1861, and justifies the belief that, if the obstructions which bar it were removed, the Avon would become one of the most productive of English rivers.

I have alluded in the above review to every district which enjoys a revenue of more than 80*l.* a year. I do not think that any useful purpose would be obtained by pushing my investigation further. Rivers on which a smaller sum is expended can hardly be said to enjoy the advantages of protection; and, where protection does not take place, improvement cannot of course be expected. I do not propose to add any comments to the contrast which I have endeavoured in the preceding pages to draw between the state of our rivers now and their condition in 1860. But the facts in the preceding pages will, I think, justify the four following conclusions:—

1st. That, on the whole, the production of our English salmon rivers has been largely increased since and in consequence of the passage of the Salmon Fishery Acts, 1861 and 1865.

2nd. That those rivers have made the greatest improvement in which the work of cultivation and protection has been carried out most actively.

3rd. That in some cases the improvement which at first took place has been checked by excessive netting.

4th. That in many cases the improvement which has taken place is imperilled by the increase of river pollution.

I have the honour to be,
Sir,
Your obedient servant,
S. Walpole.

The Right Hon. R. A. Cross, M.P.,
Secretary of State for the
Home Department.

GENERAL APPENDICES.

APPENDIX I.

Byelaws under the Salmon Fishery Act, 1873.

The following is an Abstract of the Byelaws passed by various Boards of Conservators, and confirmed by the Secretary of State, under Part VII. (Sections 39, 40, 41, 42, 43, 44) of the Salmon Fishery Act, 1873, up to the 30th of April 1875 :—

Alteration of Annual Close Season.

District.	Close Season for Nets, &c.	Close Season for Rods.
Avon and Stour	15th Aug. to 1st Feby.	2nd Oct. to 1st Feby.
Usk	1st Sept. to 1st April	2nd Nov. to 1st April.
Dovey	14th Sept. to 30th April	20th Nov. to 30th April.
Clwyd and Elwy	15th Sept. to 15th May	15th Nov. to 15th May.
Conway	15th Sept. to 30th April	15th Nov. to 30th April.
Seiont	15th Sept. to 1st March	15th Nov. to 1st March.
Cleddy	15th Sept. to 15th March	21st Nov. to 15th March.
Ogmore	15th Sept. to 30th April	1st Nov. to 30th April.
Coquet	15th Sept. to 25th March	15th Nov. to 25th March.
Kent *	15th Sept. to 1st March	—
Taw and Torridge	16th Sept. to 30th April	16th Nov. to 31st March.
Axe	20th Sept. to 30th April	20th Nov. to 30th April.
Avon and Ermé	21st Sept. to 31st March	21st Nov. to 31st March.
Camel	1st Oct. to 30th April	15th Nov. to 30th April.

N.B.—All dates inclusive.

* This byelaw does not apply to that portion of Kent, Bela, Winster, Leven, and Duddon fishery district which lies north of a line drawn from the ordinary high-water mark at the south end of Arnside Park to the ordinary high-water mark at the south end of Holme Island, and from thence in direction due west to the Cartmel shore, and which includes the Rivers Kent, Bela, Winster, and their tributaries.

Alteration of Weekly Close Season.

District.	——
Taw and Torridge	12 o'clock on Friday night to 12 o'clock on Sunday night.
Ribble	6 o'clock on Saturday morning to 6 o'clock on Monday morning.
Teign	6 o'clock on Saturday morning to 6 o'clock on Monday morning.
Avon and Stour	12 o'clock at noon on Saturday to 12 o'clock at noon on Monday.
Usk	12 o'clock at noon on Saturday to 12 o'clock at noon on Monday.

District.	
Dee - -	Below Chester weir :—12 o'clock midnight on Friday to 12 o'clock midnight on Sunday. Above Chester weir :—12 o'clock at noon on Saturday to 12 o'clock at noon on Monday.
Eden - -	From Public Waters to North British Railway Bridge :—6 o'clock A.M. on Saturday to 6 o'clock A.M. on Monday. In all other parts of District :—12 o'clock at noon on Saturday to 12 o'clock at noon on Monday.

SIZE AND DESCRIPTION OF NETS THAT MAY BE LAWFULLY USED FOR TAKING SALMON.

Axe - - -	Draft or seine net, with or without armour.
Coquet - -	Draft net or hang net, to be used, with or without a boat, by any number of men not exceeding three.
Dee - - -	Draft nets and coracle nets of legal construction. Draft nets not to exceed 200 yards in length, and coracle nets not to exceed 16 yards in length.
Ogmore - -	Draft nets, not exceeding 200 yards in length, measured when wet.
Ribble - -	Draft, or drift, or hang nets, consisting of a single sheet, without armour, to be always kept in motion, and not to remain stationary. Haaf nets, not exceeding 6 yards in length, measured when wet.
Tees - -	Draft nets, hang nets, pole or rake nets, and coracle nets.
Usk - - -	Beating nets, armed on one or both sides, not exceeding 80 yards in length, to be used by extending the net from a point at or near one bank of the river to another point at or near the same bank, and by driving therein the fish which may have been thereby enclosed.
Wye - - -	The length of any beating net in use for taking salmon within the Wye fishery district shall not exceed 80 yards, measured when wet, and the manner of using any beating net shall be as follows, namely, by extending the same from a point at or near one bank of the river to another point at or near the same bank, and by driving therein the fish which may have been so enclosed.
Yorkshire - -	Drift nets, draft or seine nets, and beating nets. Draft or seine nets, and beating nets, shall not exceed 400 yards in length, measured when wet. Such nets shall be used in the manner in which they are ordinarily used, and shall not be fixed either to the bank or shore, or by anchoring the boat from which they are worked. Drift nets to be fastened to a boat, and to be allowed to drift or float with the tide. Draft nets to be shot from a coble or boat starting from the shore or bank of the river across or partly across the river and then home, or drawn unto the bank from which they are started.

Mesh of Nets for taking Salmon.

District.	
Avon and Erme	In tidal waters of River Erme not less than 1½ inch from knot to knot. In tidal waters of River Avon between 15th June and 14th August, both inclusive, not less than 1½ inch from knot to knot.
Axe	Not less than 1½ inches from knot to knot.
Camel	Not less than 1½ inches from knot to knot.
Cleddy	Not less than 1½ inches from knot to knot.
Coquet	Not less than 1½ inches from knot to knot.
Eden	Between 15th May and 15th July inclusive, not less than 1¾ inches from knot to knot.
Kent *	Not less than 1½ inches from knot to knot.
Ogmore	" " "
Towy	Between 15th June and 15th August, both inclusive not less than 1½ inches from knot to knot.
Usk	Not less than 1½ inches from knot to knot.

* This byelaw does not apply to that portion of Kent, Bela, Winster, Leven, and Duddon fishery district which lies north of a line drawn from the ordinary high-water mark at the south end of Arnside Park to the ordinary high-water mark at the south end of Holme Island, and from thence in direction due west to the Cartmel shore, and which includes the Rivers Kent, Bela, Winster, and their tributaries.

Forms of Licences.

Avon and Erme Avon and Stour Axe Camel Cleddy Clwyd and Elwy Coquet Dart Dee Dovey Dwyfach Eden Kent Lune Ogmore Ribble Severn Taw and Torridge Tees Teify and Ayron Teign Towy Trent Tyne Usk Wyr Yorkshire	These districts have adopted a byelaw regulating t forms of licences to be used, and the manner i which licences shall be issued.

Marks and Labels to be attached to Nets, Boats, &c.

Avon and Stour Axe Camel Clwyd and Elwy Coquet Dart Dee Eden Kent Ribble Severn Taw and Torridge Tees Teify and Ayron Teign Towy Tyne Usk Wye Yorkshire	These districts have adopted a byelaw regulating the marks and labels to be attached to nets, boats, &c., used for the capture of salmon.

Prohibition of Netting at Mouth of Rivers.

District.	
Dovey	The use of nets at the mouth of the River Dysyni or on the foreshore within 300 yards on the Towyn side thereof, which distance is indicated by six stakes numbered respectively 1, 2, 3, 4, 5, 6, driven into such foreshore at ordinary spring tide high and low-water marks, and at equal intervening distances, is hereby prohibited.
Tyne	The use of nets is hereby prohibited in all those parts of the sea (in which there is a public or common right of fishery) extending coastwise from a post coloured red on Sharpness Point to a post coloured blue on the Trow Rocks, and bounded seawards as follows:—First, by an imaginary straight line from the said post coloured red on Sharpness Point to the Trinity Buoy coloured red near the extreme end of the north pier of the mouth of the River Tyne, then by an imaginary straight line from the said red buoy to the Trinity Buoy coloured black near the extreme end of the south pier at the mouth of the River Tyne; then by an imaginary straight line from the said black buoy to the said post coloured blue on the Trow Rocks. For the purposes of this byelaw, the water between the said piers shall be deemed to be sea.

USE OF GAFF.

	The use of a gaff in connection with a rod and line is prohibited within the following districts, except between the following dates:—
TEIGN	1st March and 1st September.
SEIONT	1st March and 1st November.
TEIFY AND AYRON	1st April and 15th October.
DART	2nd April and 31st October.
CONWAY	30th April and 31st October.
CAMEL	1st May and 30th September.
SEVERN	1st May and 30th September.
USK	1st May and 1st November.
WYE	1st May and 1st September.
YORKSHIRE	1st May and 1st November.
RIBBLE	1st May and 15th November.
DOVEY	31st May and 20th October.
TAW AND TORRIDGE	1st June and 15th October.
KENT	2nd June and 31st October.
EDEN	1st July and 1st November.

N.B.—All dates inclusive.

GRATINGS.

District.	
CAMEL	The gratings provided by the Conservators to be placed across the tail races of mills and artificial channels shall be placed across such tail races from 1st June to 30th April, both inclusive.
SEVERN	All gratings placed in pursuance of the Salmon Fishery Act, 1873, across the head race of any mill or across any artificial channel for conveying water for any purpose from a river at or near the point of divergence from such river, shall be kept shut from the 1st day of January to the 1st day of June, both inclusive, and across the tail race of any mill or other artificial channel as aforesaid, at or near the point of entry into such river, from the 1st day of September to the 31st day of December, both inclusive.
USK	In that portion of the River Usk which lies above Lock Bridge, near Brecon, and in all the tributaries thereof which fall into it above that point, all gratings erected under the provisions of the Salmon Fishery Act, 1873, across the head race of mills, or across any artificial channel, shall be so placed from the 15th day of November to the 31st day of March both inclusive, and in that portion of the River Usk which lies below the said Lock Bridge, and in all the tributaries thereof which fall into it below that point, all such gratings shall be so placed from the 1st day of December to the 15th day of May, both inclusive.

Use of Nets for Fish other than Salmon.

Avon and Stour	During the weekly close season, nets for other fish than salmon shall not be used of a mesh smaller than that used for catching salmon.
Dee	During the annual close season no nets for catching or taking any fish other than salmon shall be used except draft nets and trawl nets, and during the weekly close season no nets for any other fish than salmon shall be used except trawl nets.
Severn	During the annual close season all lampern wheels set on or within 20 yards of any weir shall be cross-prowed. Between sunset on Saturday and six o'clock on Monday morning, during the annual and weekly close seasons, no nets shall be used for the taking of shrimps in the estuary of the River Severn. During the annual close season no net of any description, except fixed nets for catching eels and sprats, and landing nets used in connection with a rod and line, shall be used in the night time; that is to say, between the expiration of the last hour after sunset and the last hour before sunrise.

Note.—These byelaws do not apply to any part of the district where there is a several right of fishery, nor to any part of the river where the breadth at low water is greater than six miles.

Prohibition of Night Netting in Inland Waters.

District.	
Avon and Erme Avon and Stour Axe Cleddy Clwyd and Elwy Coquet Dee Kent Ogmore Taw and Torridge Teign Usk Yorkshire	These districts have adopted a byelaw to the effect that, between the expiration of the first hour after sunset and the commencement of the last hour before sunrise, no person shall use any net in any inland water, except a landing net, or a net for taking eels.

APPENDIX II.

QUESTIONS FORWARDED BY THE INSPECTORS OF SALMON FISHERIES TO THE BOARDS OF CONSERVATORS.

1.—Has the take of fish in your district in 1874 increased or diminished: (*a.*) In tidal waters. (*b.*) In fresh waters. (*c.*) Generally?

2.—Can you give any idea of the number of fish caught in your district in 1874—(*a.*) With net. (*b.*) With rod?

3.—Have any new weirs been built, or old weirs altered in your district in 1874? If so, have passes been attached to them?

4.—Have any new passes been built in 1874, or old passes altered; and have the new passes or the alterations proved successful?

5.—Have any new mines, paper or other factories using substances deleterious to fish, been opened in your district in 1874; or has any new substance poisonous or deleterious to fish been allowed to flow into your rivers?

6.—Were any steps taken in 1874 to prevent pollution from mines and factories, or sewage from towns, from entering your rivers; and have such steps proved successful?

7.—What instruments for the capture of salmon were licensed in 1874? How many of each of these instruments were licensed? How many of these are usually worked in private and how many in public waters? How many men are required to work each of them?

8.—Were any "general" licenses issued in 1874? If so, how many? And what was the amount of revenue raised in this way?

9.—Were any prosecutions instituted under the Salmon Acts in 1874? For what offences were they instituted? What has been their result? If failure has occurred, state the cause.

NOTE.—*In every case where more than one person was summoned for the same offence the charge against each defendant should be stated separately.*

10.—State the number of water bailiffs employed in your district in 1874?

11.—Were any gratings attached to mill-lades or other artificial channels in your district during 1874? Are they effective?

ANSWERS TO THE FOREGOING QUESTIONS.

N.B.—In the arrangement of the following answers the rivers are taken in their order on the line of coast, beginning at the N.W. An Index is appended for convenience of reference.

EDEN DISTRICT.

EDEN.

1.—Increased. (*a.*), (*b.*), (*c.*),—Yes.
2.—No.

3, 4.—None.
5, 6.—No.
7 :—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Haaf net	100	1*l.*	1
Draft net	10	5*l.*	From 2 to 6.
PRIVATE WATERS.			
*Rod	160	1*l.*	1
Do.	25	5*s.*	1
Draft net	23	5*l.*	From 2 to 6.
Coop	3	10*l.*	1 or 2.
Coracle net	2	2*l.*	1

* Some of these it is believed were used in Public Waters.

8.—Yes, one for 35*l.*
9 :—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Exposing trout for sale during close season	Leath Ward	1	—	15*s.*	
Selling trout during close season	„	1	—	15*s.*	
Taking young of salmon	„	2	—	5*s.* each	
Using a snatch for taking trout	Cumberland Ward.	—	3	—	Cautioned and discharged on payment of costs.
Using a snatch for taking salmon	„	2	—	2*l.* 10*s.* each	
Taking unclean salmon	„	1	—	1*l.*	
Unclean salmon in possession	„	2	—	10*s.* each	
Otter in possession for taking salmon	„	1	—	5*l.*	
Gaff in possession for same	„	1	—	1*l.*	
Taking salmon with net of illegal mesh	„	2	—	1*l.* each	
Do.	Allerdale below Derwent.	1	—	2*l.*	
Fishing for salmon with fish roe	„	1	—	10*s.*	
Disturbing spawning beds	Eskdale Ward	2	—	5*l.* each	
SECOND OFFENCE.					
Salmon roe in possession	Cumberland Ward.	1	—	2*l.*	
THIRD OR SUBSEQUENT OFFENCE.					
Obstructing water bailiff in execution of his duty.	Cumberland Ward.	1	—	5*l.*	
Fishing for salmon in private waters without having a proper license.	„	—	3	Prosecution withdrawn on suggestion of bench, defendants having a license to fish in common waters and having been already punished for taking fish in private waters.	

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
5	2	7

11.—No.

KENT, BELA, WINSTER, LEVEN AND DUDDON DISTRICT. KENT.

1.—Greatly increased in tidal waters. The district has no fresh water fishery for salmon except with rod and line; and the rod fishing for some reason, probably from drought in the earlier part of the year, and from no obvious reason in the latter part of the year, has been very poor, notwithstanding that an abundance of fish is reported in the rivers.

2.—From the scattered nature of the fisheries in the district it is impossible to give an estimate of numbers or quantities. We can merely add that there has been a distinct increase in the take, which increase has been for the benefit of the net fishers. The price of salmon in the local markets was frequently under, and seldom exceeded, 1*s.* per lb.

3.—None.

4.—Yes, a pass over the Whitewater Rock in the river Kent, which has proved successful. A pass over the Sedgwick Weir has been remodelled, but has not proved successful.

5.—No. Not that we are aware of.

6.—No such steps taken.

7:—

PUBLIC WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Draft net - - -	9	5*l.*	3

PRIVATE WATERS.

Draft net - - -	5	5*l.*	3
Baulk net - - -	2	10*l.*	2
Rod - - - -	131	10*s.*	1

8.—Four at 5*l.* each = 20*l.*

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Keeping up mill sluices during Sunday and when not using water - -	Ambleside	1	—	6*d.* per hour.	Evidence not sufficient.
Fishing during close season -	Ulverston	—	1	—	
Fishing with lath - -	Bowness	1	—	1*s.* and costs.	

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
2	1	3

11.—None.

LUNE.

LUNE DISTRICT.

1.—The takes have not increased; on the contrary they have rather decreased during the past season.

2.—It is impossible to give any definite answer to this question, beyond saying that the number is *less* than last year.

3.—None.

4.—One pass is being constructed at Skerton.

5.—No new mines.

6.—The Board complained that pollutions had occurred in the river Brock, near Garstang, from paper mills there; and also at the Conder, from the sewage of the village of Galgate. This has been remedied, but as to the paper mills, it was found that though the water was discolored no fish had been actually poisoned.

7:—

PUBLIC WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Hang net	10	5*l.*	3
Draft net	6	5*l.*	3
Heave net	36	3*l.*	1

PRIVATE WATERS.

Baulk	1	10*l.*	1
Draft net	4	5*l.*	3
Rod	81	1*l.*	1

8.—4 at 10*l.* = 40*l.*

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of Failure.
FIRST OFFENCE.					
				£ *s.* *d.*	
Having unclean fish in possession	Lancaster.	1	—	5 0 0	—
Ditto	,,	2	—	1 0 0	—
Ditto	,,	2	—	2 0 0	—
Being in possession of illegal instruments	Sedbergh	1	—	0 10 0	—
Being in possession of the young of salmon	,,	1	—	0 10 0	—
SECOND OFFENCE.					
Having unclean fish in possession.	Kirkby Lonsdale.	1	—	£ *s.* *d.* 2 5 0	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
3	3	6

11.—None.

RIBBLE DISTRICT.

1.—(*a.*) Diminished. (*b.*) Diminished. (*c.*) Diminished, particularly in Grilse. Considerably more morts have been taken than usual. The diminution has been caused principally by the low state of the water owing to the exceptionally dry season.

2:—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
(*a.*) 4,542 (*b.*) 199	— —	No return can be obtained as to migratory trout, but it is estimated that about 5,000 were taken.		9,542 (?) 199	— —
4,741	—	—	—	9,741 (?)	—

3.—No such weirs have been built or altered.

4.—No passes have been built or altered.

5.—One new paper mill has been opened this year, and several new ones are in course of construction, and are expected to be opened next spring. As these are principally on streams already greatly polluted the Board feel that they have little power to interfere. Unless something is done very shortly to strengthen the hands of the Board in dealing with pollutions the river will scarcely be worth preserving. As referring to this subject we annex copy of a report by the superintendent water-bailiff as to the destruction of fish during the past season from this cause:—

"As regards the pollution of the river I think this year has been the worst for some time. On the 11th and 12th of July the fish were destroyed by the pollution from the paper mills at Clitheroe for a distance of three miles. Again on the 17th to Hodder foot. From the 14th of July to the 22nd there were hundreds of fish picked up dead in the tideway at Preston. I attribute it to the sewage, and chloride of lime used at Preston during the hot weather to keep back disease; for the water was low at the time, and it accumulated in the river to the depth of two feet in many places, and was washed up every tide, and fish could not live in it; and I may say the stench that arose from it was abominable. On July 24th the fish were destroyed by the dirty water which the flood brought down the Darwen. The fish on this occasion were destroyed for 6 or 7 miles, eels, flukes, salmon, morts, even anything."

6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Drift net - - -	4	5*l.*	3

In issuing these licenses the parties were specially told that the Board did not thereby admit the existence of any public waters in the district.

Private Waters.			
Draft net - - -	22	5*l.*	3
Ditto - - -	5	2*l.*	3
Drift net - - -	13	5*l.*	3
Haaf net - - -	14	5*l.*	1
Rod - - - -	357	1*l.*	1

8.—Eight general licenses have been issued, producing 72*l.* 10*s.*

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of Failure.
First Offence.					
Having exposed for sale unseasonable salmon	Clitheroe.	Withdrawn on payment of costs of summons.			
Polluting a tributary of the river Ribble	"	Withdrawn on payment of part of the costs.			
Fishing without a license	Southport.	Withdrawn on payment of costs and taking out a net license.			
Killing fish without a license	Bolton by Bowland.	1	—	5*l.* and costs.	—
Ditto	"	1	—	2*l.* and costs.	—
Ditto	"	Withdrawn, summons not served.			

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
8	1	9

11.—No.

Dee.

DEE DISTRICT.

1.—Increased. (*a.*), (*b.*), (*c.*) Yes.

2:—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
(*a.*) 3,126	—	1,309	—	4,435	—
(*b.*) 59	—	No return.		59	—
3,185	—	1,309	—	4,494	—

This is only an estimate of the fish that have been seen by the bailiffs. The fishermen will always try to deceive you in the number of fish taken.

3.—No weirs have been built or altered.

4.—No new passes, but the pass at Erbistock is under repair and was stopped by floods.

5.—Not known.

6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Draft net	47	5*l.*	3
Private Waters.			
Coracle net	13	2*l.* 5*s.*	2
Rod and line	75	1*l.*	1
Do. Weekly	7	10*s.*	1
Do. Daily	5	5*s.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Fishing with stake nets -	Neston, Cheshire.	3	—	5*s.* and costs	—
Offering salmon for sale in annual close season -	Chester	—	1	—	—
Taking unclean salmon -	Llangollen	—	2	—	Perjury.
Ditto - - - -	„	1	—	3*l.* 4*s.* 6*d.*	—
Two of these men were convicted of perjury at Ruthin Assizes and sentenced to 7 months' hard labour.					
Fishing without license -	Wrexham	—	2	—	Bench thought the law too stringent altho' the men had not their license they had 2*l.* part paid of it, and all they had to pay was 5*s.*
Killing salmon at Erbistock Mill with an unlawful instrument - - -	„	1	—	2*l.* and costs	—
Attempting to take fish with illegal instrument - -	Chester	—	1	—	Mistake of summoning officer, Chester.
Night fishing with fine net in private waters - -	Bangor Isycoed.	1	—	15*s.* and costs	—
Snatching fish at Llangollen pass - - - -	Llangollen.	—	1	—	—
Attempting to take fish with illegal meshed net - -	Chester.	—	2	—	—
Second Offence.					
Taking salmon fry - -	Llangollen	1	—	2*l.* 10*s.* & costs.	—
Ditto - - - -	„	1	—	1*l.* 10*s.* & costs.	—
Taking unclean fish - -	„	1	—	1*l.* & costs.	—
Fishing nightly close time -	Wrexham	2	—	1*l.* 10*s.* & costs.	—
Third or Subsequent Offence.					
Taking unclean fish - -	Llangollen	1	—	5*l.* and 2*l.* for fish, and license forfeited, and costs.	

10.—Various.
11.—None attached.

CLWYD AND ELWY DISTRICT.

Clwyd and Elwy.

1.—(*a.*), (*b.*), (*c.*) Increased.

2 (*a*):—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
About 1,046	Average 6	—	—	1,046	6,276 lbs. = Tons. 2 cwts. 16 qrs. 0 lbs. 4

(*b*).—No account.
3.—None.
4.—No change.
5.—No.
6.—Nothing has been done.

7 :—

PRIVATE WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Net - - - -	6	3*l.* 10*s.*	2
Do. - - - -	1	3*l.* 10*s.*	4
Rod - - - -	60	1*l.*	1

8.—None.

9 :—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of Failure.
FIRST OFFENCE.					
Taking Salmon with lights at night - - -	Ruthin.	2	1	3*l.*	Insufficient proof.
Gaffing salmon - -	Abergele.	2	—	2*l.* and costs.	—
Ditto - - -	"	1	2	1*l.* 10*s.* & costs.	Incorrect summons

10 :—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
2	—	2

11.—Wire netting was tried, but, owing to great quantity of branches, &c., coming down river, had to be removed.

CONWAY.

CONWAY DISTRICT.

1.—(*a.*) We do not know. (*b.*) Increased. (*c.*) About the same as usual.

2.—(*a.*) Do not know. (*b.*) :—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
120	1,735	242	533	362	2,268

This account is from the River Conway alone. No account was kept of the Lledr, but the rod-fishing there was not nearly so good as last year.

3, 4, 5, 6.—No.

7 :—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Weir - - -	2	3*l.*	2
PRIVATE WATERS.			
Draft net - - -	5	3*l.*	2
Coracle net - - -	2	2*l.*	2
Fishing basket - -	1	1*l.*	1
Rod for season - -	14	1*l.*	1
Do. for month - -	8	10*s.*	1
Do. for fortnight - -	7	6*s.*	1
Do. for week - -	13	3*s.*	1
Do. for day - -	77	1*s.*	1

8.—No.
9.—No proceedings.
10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
1	—	1

11.—None that we are aware of.

SEIONT, GWRFAI, AND LLYFNI DISTRICT.

SEIONT, GWRFAI, AND LLYFNI.

1.—(*a.*) Increased considerably. (*b.*) The fish have increased in size, but not in numbers. (*c.*) Increased, especially at the northern portion of the district, in the Menai Straits, between the Tubular and Suspension bridges, where rocks and currents abound and where salmon are now taken in considerable quantities; the increase there is admitted by the local fishermen to be, of late years, very great indeed.
2.—No; no reliable return can be obtained.
3, 4, 5.—None.
6.—None, our rivers are very pure.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Net	6	5*l.*	4
Weir	1	10*l.*	2
Rod and line	28	1*l.*	1

8.—None.
9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Taking unseasonable salmon	County	2	—	1*l.*	—
Taking salmon fry	"	1	—	1*l.*	—
Taking salmon fry	"	1	—	1*l.* 10*s.*	—
Using a gaff	"	1	—	1*l.*	—
Killing salmon with a spear	"	2	—	10*s.*	—
Fishing without a license	"	1	—	2*l.*	—
Fishing with an otter	"	2	—	5*s.*	—
Assaulting water bailiff	"	1	—	1*l.*	—
Do.	"	2	—	10*s.*	—
Taking salmon with an illegal net during close time.	"	3	—	2*l.* and net condemned.	—
Killing a salmon without a license	"	1	—	1*l.* 1*s.*	—
Having gaff in his possession and searching for salmon.	"	1	—	1*l.* (and costs in each case).	—
THIRD OR SUBSEQUENT OFFENCE.					
Taking an unseasonable salmon	County	1	—	3 months' imprisonment.	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
2	7	9

11.—Yes, and all effective.

DWYFACH.

DWYFACH DISTRICT.

1.—This is the first year of the existence of the Board, so no comparison can be made.

2.—(*a.*) No net licenses have been issued in this district yet. (*b.*) No approximate idea of the number of salmon caught with rod and line can be given at present—not many, legally, as the issue of licenses has been very limited. The take of trout has been considerable.

3.—There is a weir or fish trap at the entrance of the Pwllheli Harbour. This was in existence at the time the Board was formed, but no prescriptive right to it has been acquired. The owner has been requested to remove it, but he has refused to do so; however, on finding that the Board had resolved to watch it with a view to institute proceedings against him he caused a hole about a yard square to be made in it at the deepest end, which affords means of escape to any fish that may go into the trap.

4.—No.

5.—It is believed not.

6.—The Pwllheli Gas Co. were in the habit of allowing an overflow of tar and gas water from their works to be discharged into one of our salmon rivers which flows near them. Application has been made to the gas company to abate the nuisance, and they have promised not to continue it.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PRIVATE WATERS.			
Rod - - - -	6	1*l.* 1*s.*	1

8.—No.

9.—None up to 1st December.

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
2	—	2

Besides the two permanent bailiffs, two gamekeepers have been appointed.

11.—A strong iron grating was placed in seven of the mill lades in this district, but there is such a prejudice against them among mill occupiers (who complain that they cause a serious obstruction to their mills), and among poachers, that every opportunity is taken to injure them; and between these persons and the action of the floods in the rivers upon them there has been a difficulty to keep them intact.

DOVEY, MAWDDACH, AND GLASLYN.

DOVEY, MAWDDACH, AND GLASLYN.

1.—(*a.*), (*b.*), (*c.*) Increased.

2.—The number of salmon taken by nets in the Dovey in 1874 has almost exactly doubled the take of 1873.

3, 4.—No.

5.—Yes, on the Dovey a new mine was started, and a good deal of poisonous stuff was for a short time turned into the river, but on a threat of legal proceedings filter beds are being made, and in the interim the washing of ore has been discontinued.

6.—No, except at the Dylifa mines, on a tributary of the Dovey, where, on the threat of proceedings, the pits for cleansing have been better attended to; *vide* answer to query No. 5.

7.—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Draft net - - -	8	5*l.*	2
Coracle net - - -	1	2*l.*	2
Private Waters.			
Draft net - - -	3	5*l.*	2
Rod - - - -	127	From 2*s.* 6*d.* to 1*l.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Using otter - -	Portmadoc -	—	1	- - -	Deficient evidence.
Using gaff - - -	Penrhyn -	2	—	5*s.* and 40*s.* and costs.	—
Fishing in private waters	„ -	1	—	1*s.* and costs.	—
Spearing - - -	Machynlleth	5	—	3*l.*, 2*l.*, 4*l.*, 4*l.* and 4*l.* 8*s.* and costs.	—
„ - - -	—	—	3	- - -	No evidence.
„ - - -	Dolgelly -	—	2	—	—
„ - - -	„ -	1	—	40*s.* and costs.	—

11.—No.

TEIFY AND AYRON DISTRICT.

TEIFY AND AYRON.

1.—The take of fish in this district in 1874 did not vary from that of the preceding year.

2.—No account of the number of fish caught in this district in 1874 can be given.

3.—None.

4.—None.

5.—None.

6.—None.

7:—

Public Waters.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Draft net - - -	23	5*l.*	6
Pole net - - -	1	5*l.*	1
Coracle net - - -	33	2*l.*	2
Rod and line - -	37	1*l.*	1
Monthly tickets for do. -	2	10*s.* 6*d.*	1
Fortnightly „ „ -	12	5*s.*	1
Putts - - -	4	2*s.* 6*d.*	1 for all.

8.—Yes; one at 8*l*.
9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of Failure.
First Offence.					
Using a stroke-hall	Aberayron.	1	—	3*l*.	—
Ditto	„	1	—	1*l*.	—
Having a spear in his possession	Tregaron.	1	—	1*l*.	—
Having 10 unseasonable salmon in his possession	Newport (Pem.)	1	—	7*l*.	—
Fishing during weekly close time	Cardigan	2	—	1*l*.	—
Using an illegal net	„	2	—	1*l*.	—
Fishing during annual close season	„	5	—	1*l*.	—
Having unclean salmon in his possession	„	1	—	5*s*.	—
Second Offence.					
Using illegal nets	Cardigan.	3	—	5*l*.	—
Third or Subsequent Offence.					
Using three illegal nets	Cardigan.	1	—	10*l*. or three months' imprisonment.	—

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
3	2	5

11.—None.

Cleddy.

CLEDDY DISTRICT.

1.—Diminished.
2, 3.—No.
4.—One has been built and answers well.
5, 6.—No.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Rod	25	10*s*. 6*d*.	1
Coracle net	5	1*l*. 0*s*. 0*d*.	2

8.—None.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty if convicted.
First Offence.				
Having in possession unseasonable fish.	Roose Petty Sessions held at Haverfordwest.	2	—	6*d.* and costs, and 1*s.* each fish.

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
—	1	1

11.—No.

TOWY DISTRICT.

Towy.

1.—The season has been a very precarious one in consequence of the continuous dry weather; as far as we can ascertain, the take has not been an average one for the reason above stated.

2.—It is impossible to give any idea of the number of fish caught.

3.—No new weirs have been built in 1874; the weir at Cothi Bridge mill has been purchased, and altogether taken away, leaving the channel entirely free: this was purchased by the gentlemen of the upper waters, a donation of 40*l.* being added by the Board of Conservators of this district.

4.—A new pass has been built at the Gwilli weir, near Carmarthen; at present it is rather a failure, as the river bed has not changed and the fish still keep to the old course.

5.—No.

6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Coracle net	66	2*l.*	2
Hand net	8	1*l.*	1
Draft net	20	5*l.*	3
Rod and line	110	1*l.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty if convicted.	Cause of Failure.
First Offence.					
Liming the river	Carmarthen Borough.	3	—	6*d.* each.	—
Using gaff	,,	2	—	12*s.* 6*d.*	—
Having unclean salmon	,,	1	—	1*l.*	—
Fishing without license	County Petty Sessions at Carmarthen.	1	—	10*l.*	—
Using gaff	,,	2	—	12*s.* 6*d.*	—
Having salmon in possession in close time	Llangadock.	1	—	10*s.*	—
Ditto	,,	1	—	30*s.*	—
Illegal fishing	Llandilo.	2	—	20*s.*	—
Unclean salmon	,,	1	—	20*s.*	—
Using spear	,,	1	—	2*l.*	—
Ditto	Llanelly.	5	—	1*l.*	—
Having unclean fish	,,	1	—	10*s.*	—

10:—

WATER BAILIFFS.

	Permanent.	Temporary.	Total.	
	4	3	7	

11.—No.

OGMORE DISTRICT.

OGMORE.

1.—It has been about the same as in former years. All the net fishing is in tidal waters.

2. There is no means of ascertaining. Salmon are hardly ever caught by legal means.

3.—No new weirs have been built or old weirs altered.

4.—There are no passes to any of the mill weirs.

5.—New coal pits are being opened all over the district, and the rivers are much polluted by coal washing, and sewage.

6.—None. The chief pollution is from coal washing which is not poisonous and cannot therefore be stopped.

7:—

PRIVATE WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Draft net - - -	1	1*l.* 11*s.* 6*d.*	3
Weir - - - -	1	1*l.* 1*s.* 0*d.*	1
Rod for the season - -	24	1*l.* 1*s.*	1
„ month - -	17	10*s.* 6*d.*	1

Only half the licence duty on nets was levied this season, on account of the season being more than half over when the scale came into force.

8.—None.

9. No prosecutions have been instituted.

10:—

WATER BAILIFFS.

	Permanent.	Temporary.	Total.	
	—	1	1	

11.—None.

RHYMNEY.

RHYMNEY DISTRICT.

1.—(*a.*), (*b.*), (*c.*) Diminished.

2.—(*a.*), (*b.*) No returns.

3, 4, 5.—No.

6.—The Board is helpless under the existing laws.

This river formerly abounded in sewin and large numbers were taken from a pound to 2 lbs. in weight; but now, owing to pollution from mines, or rather tin works, they are greatly diminished, and moreover the minimum size of the legal mesh is too large for their capture. Owing to pollutions very few salmon now run up this river until the winter.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PRIVATE WATERS.			
Draft net - - -	1	3*l.*	2

8.—No.

9.—None.

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
—	1	1

11.—No.

USK DISTRICT.

1.—(*a.*), (*b.*), (*c.*) Decreased.

2.—(*a.*) Impossible to ascertain.

(*b.*) with rod about 690 salmon, weighing 6,190 lbs.

3.—We believe not.

4.—A new fish pass has been erected at Tarall weir (the weir having been constructed in 1873), and we believe it will be successful, but the work appears to us too weak.

The fish pass at Aberbran has been improved and is successful.

5.—New tin-plate works have been opened, at Cwmbran, which discharge the whole of their waste pickle into the Afon Llwyd; and generally the condition of that river has become worse, so that the main stream of the Usk is much polluted and fish are deterred from ascending the river.

6.—Under the present laws the Board are quite helpless and the pollutions increase every day.

7:—

PRIVATE WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Putcher	3,200	3*l.* per 100	7 for all.
Putt	150	2*s.* 6*d.*	4 „ „
Stop net	5	7*l.* 10*s.*	1
Beating net	1	20*l.*	4
Rod	10	1*l.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
Monmouthshire District (with Crickhowell).					
FIRST OFFENCE.					
Possession of young of salmon.	Usk	1	—	20*s.* and costs.	—
Fishing without a rod license.	„	1	—	40*s.* and costs.	—
Possession of spear and gaff with intent, &c.	„	2	—	40*s.*, 40*s.* and costs.	—
Gaffing a salmon in company with *	„	1	—	40*s.* and costs.	—
Possession of spear and gaff, with intent, &c., in company with †.	Pontypool	1	—	20*s.*, including costs.	—
Possession of an unseasonable salmon.	Crickhowell	4	—	50*s.*, 50*s.*, 50*s.*, 20*s.* and costs.	—
Using chloride of lime for killing fish.	Crickhowell	2	—	—	Committed for trial at Brecon quarter sessions; one pleaded guilty, and was sentenced to three months hard labour; the other and principal offender was acquitted by the jury, although the evidence appeared to be of the clearest possible description.

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of Failure.
SECOND OFFENCE.					
* Gaffing a salmon (see above).	Usk - -	1	—	100*s.* and costs.	—
THIRD OR SUBSEQUENT OFFENCE.					
† Possession of spear and gaff (see above).	Pontypool -	1	—	100*s.* and costs.	—
Fishing with putchers during weekly close time.	Newport -	1	—	20*s.* and costs.	The previous convictions were not pressed.

Brecon District, comprising the Three Petty Sessional Divisions of Brecon (County and Borough), and Defynock.

FIRST OFFENCE.

Taking an unseasonable salmon.	Brecon Co.	—	1	—	We cannot say.
Possession of gaff, with intent, &c,	„	—	1	—	We cannot say.
Taking unseasonable salmon	„	—	1	—	We cannot say.
Possession of young of salmon.	„	1	—	20*s.* and costs.	—
Assaulting water-bailiff (same defendant as the last).	„	—	1	—	Dismissed, as we understand because, although one water-bailiff produced his warrant, the other did not. Neither was asked for it.
Obstructing water-bailiff in search (same defendant).	„	—	1	—	
Possession of unseasonable salmon.	Brecon Bor.	1	1	60*s.* and costs	Magistrates considered complicity not proved in one case.
Possession of unseasonable salmon.	Defynock -	1	—	10*s.* and costs.	—
Assaulting water-bailiff (the "Senny Bridge case").	„	1	—	10*s.* and costs.	—
Taking young of salmon -	„	—	1	—	Dismissed with a caution.
Possession of young of salmon (the "Defynock poaching case").	„	—	1	—	The cases were the origin of a trial in the Court of Queen's Bench, when the facts appeared.
Assaulting water-bailiff (the "Defynock poaching case").	„	—	3	—	

SECOND OFFENCE.

Angling for salmon without a licence.	Brecon Co.	—	1	—	We cannot say.
Possession of unseasonable salmon.	Brecon Bor.	1	—	50*s.* and costs.	—
Possession of unseasonable salmon.	Defynock -	1	—	60*s.* and costs.	—

THIRD OR SUBSEQUENT OFFENCE.

Possession of unseasonable salmon.	Brecon Co.	1	—	100*s.* and costs.	—
Taking unseasonable salmon (same defendant at another time).	„	1	—	100*s.* and costs.	—
Angling for salmon without a license).	„	1	—	71*s.* and costs, 21*s.*	—
Obstructing water-bailiff in search.	„	—	1	—	The two magistrates could not agree whether a pocket was an instrument for carrying fish.

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
10	4	14

11.—A grating has been attached to the mill lade at Aberbran. It is effective.

WYE DISTRICT.

WYE.

1.—(*a.*) Decreased, especially in grilse. (*b.*) Decreased in middle waters. (*c.*) No increase in take by rod and line.

2.—(*a.*), (*b.*) No idea can be given for want of returns.

3, 4, 5, 6.—No.

7:—

PUBLIC WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Draft net	3	5*l.* each	3 or 4
Beating net	4	5*l.* each	3

These licenses were issued on the forms to be used in public waters, but the fisheries (Hoarwithy Waters) wherein they were used are claimed by the Riparian Proprietors, and the right of the public is disputed.

PRIVATE WATERS.

Rod and line	154	1*l.* each	1
Draft net	16	5*l.* „	3 or 4
Beating net	7	5*l.* „	3
Stop net	50	3*l.* „	1
Coracle net	1	2*l.* „	2
Lave net	2	1*l.* „	1
Putcher	2,097	1*l.* for every 50	4 for all
Putt	1	2*s.* 6*d.* each	

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Having unclean salmon in possession	Hay	2	—	1*l.* 15. each.	—
Having salmon pink in possession	Ross	3	1	Two 2*l.* each One 1*l.*	Case withdrawn on account of age of offender, a boy of 12 years; the costs were paid by offender.
Using a net and killing four salmon during the annual close season	Ross	2	—	12*l* each and 2*l.*17*s.*6*d.* costs	—
Fishing with rod and line without a license	Builth	1	—	2*l.* and costs.	—
Using a light and spear for the purpose of taking salmon	„	1	—	2*l.* and costs.	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
4	12	16

11.—No.

SEVERN.

SEVERN DISTRICT.

1.—(*a.*), (*b.*), (*c.*) As compared with 1872 and 1873, increased.

2:—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
(*a*) 16,500 (*b*) 16	210,560 160	No return.		16,500 16	210,560 160
16,516	94 tons.	—	—	16,516	94 tons.

The above is an approximate estimate of the take.

3.—The weir at Maisemore on the Severn has been completed and a fish pass attached but not yet certified.

The part of Pontiscowrhyd weir on the Verniew which was blown down has been rebuilt, but no new fish pass has been attached or any alteration made in the old one.

Llansaintffraid weir. The secondary weir here has been repaired and raised to its original height.

4.—Yes. (1.) On the Severn, new passes built at Maisemore and Milford, old passes altered at Diglis and Lincomb. (2.) On the Verniew, secondary weir repaired at Llansaintffraid.

There has not been sufficient time or water to give an opportunity of saying if the new passes or alterations have proved successful.

5.—Not that the board is aware of.

6.—No prosecution was instituted. The attention of the Board continues to be given to the best mode of purifying the refuse from lead mines, in which they have generally met with the hearty co-operation of the proprietors; and new settling pits have been made in the Van and Van Consols mines, which have proved partially successful. No steps have been taken to prevent pollutions from factories or sewage from towns, from entering the rivers, except by giving notice to the owners of some of the former to abate the nuisance: this has generally proved successful, and had the desired effect.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Rod and line	41	10*s.*	1
Draft net	12	3*l.*	2 to 5.
Do.	14	2*l.*	2 to 5.
Do.	15	1*l.*	1 to 3.
Lave net	86	2*l.*	1
Private Waters.			
Draft net	8	5*l.*	4 or 5.
Do.	7	4*l.*	4 or 5.
Do.	5	1*l.*	2
Lave net	19	2*l.*	1
Stop net	16	3*l.*	1
Putt	255	2*s.* 6*d.*	A large number of these instruments are worked by one man; in the aggregate they employ about 25 to 30 men.
Putcher	5,280	1*l.* per 50.	
Outrigger	11	1*l.*	
Do.	3	5*l.*	

8.—Yes.; one at 15*l.*

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Placing a net in Pool brook to catch fish descending the stream in the month of January.	Upton-on-Severn.	2	—	Fined 2*l.* and 12*s.* 9*d.* costs each, one paid, the other imprisoned for 14 days in default.	
Having an unseasonable salmon in his possession.	Oswestry	1	—	Fined 2*l.* and 7*s.* 6*d.* costs.	
Assault on a water bailiff -	Tewkesbury	1	—	7 days' imprisonment in default of paying fine of 2*s.* 6*d.* and 17*s.* 6*d.* costs.	
Using a device in a salmon river for catching the fry of eels called elvers.	do.	2	—	Fined 1*s.* and 9*s.* costs each.	
Ditto - - -	do.	1	—	Fined 1*s.* and 11*s.* 7*d.* costs.	
Ditto - - -	Gloucester	—	3	—	Not proved to the satisfaction of the bench that elvers were the fry of eels.
Ditto - - -	do.	1	—	Fined 3*l.* and 1*l.* 3*s.* costs.	
Ditto - - -	do.	1	—	Fined 1*s.* and 11*s.* costs.	
Ditto - - -	do.	1	—	Fined 1*s.* and 11*s.* 6*d.* costs.	
Ditto - - -	Whitminster	3	—	Fined 10*s.* each including costs.	
Ditto - - -	Newnham	1	—	Fined 10*s.* and 1*l.* costs.	
Fishing with an illegal trammel net in the night time on Sunday.	Ironbridge	1	—	Fined 5*l.* and 11*s.* 6*d.* costs.	
Second Offence.					
Taking salmon in the annual close season.	Thornbury	—	1	—	The prisoner surrendered to a warrant, having absconded since October 1871, and although pleading guilty the bench held that they had no power to convict after 6 months from the commission of the offence.

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
16	9	25

11.—Yes; two, believed to be effective, one at Pontiscowrhyd on the Verniew and the other on Leigh Brook.

AVON BRUE AND PARRET.

AVON BRUE AND PARRET DISTRICT.

1.—(*a.*) Increased. (*b.*) None.

2.—(*a.*), (*b.*) None.

3, 4, 5.—No.

6.—The Local Government Board sent down their inspector, Dr. Blaxall, to inquire into the causes of an outbreak of small pox and typhoid fever, and in his report to the Council of Bridgwater he intimated that he should report to his Board the necessity of preventing the town sewage from emptying itself into the River Parret so close to the town. The town council have therefore under their consideration the question of its removal or discontinuance by utilisation.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Hang - - - -	1	10*l.*	2
Putcher - - -	688	1*l.* for 50	6 for all

8.—None.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty if convicted.	Cause of failure.
Using hang without license -	Bridgwater, (County).	1 case arranged on payment of duty and 3*l.* 3*s.*			
Using putchers - -	do.	1	—	4*l.* and costs.	—
Ditto - - -	do.	3 cases arranged on payment of 1*l.* 1*s.*			
Using dip net without license	Bridgwater, (Borough.)	1	—	4*l.*	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
One	—	One.

11.—None.

TAW AND TORRIDGE.

TAW AND TORRIDGE DISTRICT.

1.—The Board consider that the take of fish in this district in 1874 has diminished.

2.—(*a.*) The Board can give no accurate account of the number of fish caught with net in this district in 1874. (*b.*) After a careful inquiry by a member of the Board, it was found that the number of salmon and grilse taken with the rod and line in 1874 was about 39 in the Taw, and 28 in the Mole, a tributary of the Taw. The Board has no reliable reports from the Torridge.

3.—None have been built or altered.

4.—No new passes have been built or altered in 1874.

5.—The Board are not aware of any new mines, paper, or other factories being opened, or of any new substances poisonous or deleterious to fish being allowed to flow into the rivers.

6. The sewage of Barnstaple still continues to flow into the River Taw, and the Board are not aware that the Barnstaple urban sanitary authority are adopting any measures to obviate this pollution. The same evil exists in most of the other towns situate on rivers in the district.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
V weir	3	6*l.*	2
Net	30	5*l.*	4
Private Waters.			
Box	2	6*l.*	1
Rod	165	10*s.* 6*d.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Using a net fixed to the soil	South Molton	1	—	10*l.*	
Fishing for salmon in close time	"	4	—	5*l.*	
Killing a salmon on 30th Nov.	"	1	—	5*l.*	
Aiding and abetting above	"	1	—	5*l.*	
Using fixed engine	"	1	—	10*l.*	
Not keeping sluices shut	"	—	1	—	Penalty not enforced; same defendant as above.
Fishing within 100 yards below a weir	"	2	—	10*s.* and 2*l.*	
Having spear in possession to catch or kill salmon	"	1	—	2*l.*	
Aiding and abetting above	"	1	—	2*l.*	
Using a gaff	"	1	—	5*s.*	
Taking salmon in close season	Chulmleigh	2	—	3*l.*	
Aiding and abetting above	"	—	1	—	Did not think there was preconcerted intention.
Having a gaff with intention to kill salmon.	"	2	—	2*l.*	
Using a fixed engine for facilitating the catching of salmon	"	2	—	5*l.* and 3*l.*	
Fishing during close time	Hatherleigh	2	—	1*l.* and 5*l.*	
Not keeping sluices shut	Bideford	6	—	5*s.* each.	
Having unseasonable salmon in possession during annual close season	"	1	—	3*l.*	
Not keeping sluices shut	Barnstaple	1	1	10*s.*	Structure not intended to be used as a sluice.
Fishing with small meshed net	"	2	—	5*l.* and 1*l.*	
Fishing with illegal net	"	1	—	5*l.*	
Illegally taking salmon	"	—	3	—	

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
3	4	7

11.—No gratings were attached to mill lades or other artificial channels in this district in 1874.

CAMEL.

CAMEL DISTRICT.

1.—(*a.*) (*b.*) (*c.*) A considerable increase.

2:—

Salmon.		Trout (migratory.)		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
(*a.*) 15	—	600	—	615	—
(*b.*) 2	—	100	—	102	—
TOTAL 17	—	700	—	717	—

3.—No new weirs have been built.

The waterworks weir at Dunmere was considerably altered. The portion on the left bank of the stream, between the old salmon ladder and the bank, which was washed away in the winter of 1873, was restored by the erection of a perpendicular wall of masonry.

Near the right bank a hatchway, 7 ft. by 7 ft., was constructed with a smaller hatch, 1 ft. by 1 ft. 6 ins. in the bottom of the larger hatch.

In accordance with plans approved by Mr. Walpole, a channel, intersected by two sloping weirs, was constructed, communicating with the main stream. By this arrangement the fish found their way to the higher waters.

On the 1st January 1875 the centre portion of the weir was washed away, and much of the new work considerably damaged. There now exists a clean breach, through which the river flows without obstruction.

The Bodmin Waterworks Company propose to extend the wall as far as the hatch, but inasmuch as the salmon ladder must be refixed it would seem desirable that the Inspectors should advise as to the best mode of reconstruction, so as to obtain sufficient provision for the passage of the fish.

5.—Clay works at Blisland.

6.—Sewage works were commenced for the town of Bodmin in February 1873, but not yet completed.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Net - - - -	14	2*l.*	2
Rod and line - -	19	5*s.*	1
Rod and line - -	10	1*s.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Catching salmon during close season.	Hundred of Trigg.	1	—	25*s.* and costs	—
Having in possession unseasonable salmon,	"	1	—	5*l.* and costs	—
Do. do.	"	1	—	2*l.* and costs	—
Having in possession a spear -	"	1	—	4*l.* and costs, in default committed to prison, one month hard labour.	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
1	1	2

11.—No.

FOWEY DISTRICT.

FOWEY.

1.—The take of fish during the last season was very much less than in the preceding season, in which the take of fish was unusually large.

2:—

—	Salmon.		Trout (migratory).		Total.	
	No.	lbs.	No.	lbs.	No.	lbs.
With net, according to the returns, about -	100	—	—	—	100	—
With rod, " " " -	15	—	—	—	15	—

3, 4, 5, 6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Rod and line - -	11	5*s.*	1
Draft net - -	6	2*l.*	From 2 to 6.
Trammel net - -	1	16*s.*	1
NO PRIVATE WATERS.			

8.—No general licences have been issued.

9.—No.

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
—	1	1

11.—No.

TAMAR AND PLYM DISTRICT.

TAMAR AND PLYM.

1.—Generally decreased.

2.—(*a.*) No account rendered. (*b.*) About 400, averaging in weight from 1 to 12 lbs.

3, 4.—None.

5.—Occasionally a little from a small gasworks at Gunnislake, in the parish of Calstock, on the banks of the River Tamar.

6.—Two small catch-pits have been made at Furze Mill Wood mine, on the River Walkham, which have prevented a great deal of heavy refuse from flowing into the river; but they are not quite effectual. Actewelline Anderton, which has been abandoned for many years, is set to work on the river Tavy. There are no catch-pits here of any kind to prevent the refuse from being carried into

the river. The mine is worked for tin. No fresh steps have been taken at any of the other mines in the district.

7:—

PRIVATE WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Net - - - -	4	3*l.* 10*s.*	4
Rod and line - -	188	7*s.* 6*d.*	1

8.—None.

9:—

Nature of Offence.	Name of Bench before which case was held.	Convicted.	Acquitted.	Penalty, if convicted.
FIRST OFFENCE.				
Selling salmon in close season in the Plymouth fish market	Withdrawn on proof being given that the salmon came from the Avon district, where the open season had been extended.			

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
3	2	5

11.—No new ones.

AVON AND ERME.

AVON AND ERME DISTRICT.

1.—(*a.*) Slight increase. (*b.*) The take by licensees has diminished; but the take by poachers has considerably increased. (*c.*) Slight increase, there being more salmon in the Avon the last season than for many years before.

2.—Not able to obtain any information from licensees.

3.—No.

4.—No.

5.—No. But Messrs. Crossing's flax mill at South Brent is still worked, and there is a good deal of poisonous and deleterious matter carried from it into the river.

6.—No. But when the China clay works, about 2 miles above South Brent, now stopped, were in operation, a great deal of china clay escaped into the Avon, forming a deposit of clay at the bottom of the river, extending for several miles down the river.

7:—

PUBLIC WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Draft net - - -	5	5*l.*	3 to 4
Hand net - - -	1	1*l.*	2
Rod - - - -	24	1*l.*	1
Box, crib, or cruive - -	1	5*l.*	2

8.—No.

9:—

Nature of Offences.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Taking an unseasonable salmon.	Stanborough and Coleridge.	1	—	5*l.*	
Having possession of unseasonable salmon - -	,,	1	—	5*l.*	
Using spear - - -	,,	1	—	5*l.*	
Having possession of a spear	,,	2	—	5*l.*	
Having possession of gaff -	,,	1	—	5*l.*	
Using a gaff - - -	,,	1	—	2*l.*	
Attempting to take a truff illegally.	Ermington and Plympton.	1	—	1*s.*	

10:—

Water Bailiffs.

Permanent.	Temporary,	Total.
1, employed by the Board.	2, by the Board	3
	2, by net licensees.	2
		5

11.—No.

DART DISTRICT.

Dart.

1.—(*a.*), (*b.*), (*c.*) From the opening of the season to the end of March the take of fish was much increased over previous years, but after that time fish were scarcer, owing to the very dry summer.

2, 3, 4.—No.

5.—A new tin mine has been opened in December. The effect on the river is not yet known.

6.—Yes. Filtering pits were made at the factories of Messrs. Hamlyn Brothers and Messrs. Berry and Sons at Buckfastleigh.

The quantity of water in the river since their completion will not admit of judging whether this plan is a success, but it is very doubtful.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Net - - - -	20	5*l.*	4
Private Waters.			
Net - - -	2	5*l.*	4
Rod for the season - -	34	1*l.*	1
Do. week - -	2	7*s.* 6*d.*	1

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty if convicted.	Cause of failure.
First Offence.					
Being in possession of unseasonable fish on 9th February.	Totnes -	1	—	1*l.* 9*s.* 0*d.* and costs.	—
Do. on 7th February.	„	1	—	Do., but in default of payment was sent to prison for 14 days.	—
Killing trout on 2nd October	„	—	1	He pleaded guilty, but stated he was misled by the cautionary notice with regard to dates omitting the words "both days inclusive."	
Killing salmon while attempting to run up Totnes Weir, 27th June.	„	Absconded before summons could be served on him.			
Using net as fixed engine, and shooting net within 100 yards of another before the first was completely hauled in.	„	—	4	Withdrawn by consent, on parties paying all costs and promising to abstain in future from similar practices.	
Second Offence.					
Fishing within 100 yards of Totnes Weir on 4th March.	Totnes -	—	3	—	Not known by the Board of Conservators.
Third or Subsequent Offence.					
Fishing within 100 yards of Totnes Weir on 20th March.	Totnes -	3	—	One 6*l.* and costs. Two 3*l.* and costs.	—
Using net as a fixed engine, and also for shooting net within 100 yards of another net before the first was completely hauled in.	„	—	4	Case withdrawn by consent of magistrates on parties paying all costs, and promising to abstain in future from similar practices, which up to this time have been general among the fishermen.	

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
4	—	4

11.—The board have determined to place a revolving grating at the mill tail of Messrs. Barnes mill at Kilbury, but it cannot be done until the dry season.

Teign.

TEIGN DISTRICT.

1.—No change has been observed.
2, 3, 4, 5.—No.
6.—No steps were taken, the law not being sufficiently explicit.
7.—None.
8, 9.—No.

10.:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
—	1	1

11.—None were attached.

EXE DISTRICT. EXE.

1.—(*a.*), (*b.*) Supposed to have slightly increased in both.
2.—No.
3, 4.—None.
5.—No new.
6.—None.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Draft net - - -	4	3*l.* 10*s.*	2 or 3
Rod - - - -	5	7*s.* 6*d.*	1

8.—No.
10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
—	1	1

11.—None.

OTTER DISTRICT. OTTER.

3.—No new weirs have been built or old weirs altered in 1874.
4, 5.—None.
6.—The sewage of Ottery St. Mary, which ran into a mill leat tail, a short distance from the town, has been conducted across an intermediate meadow about 100 yards, and from thence direct into the river Otter. The sewage, since 1850 to this time, has run into the mill leat tail, and with the water in the leat runs about a quarter of a mile, and there discharges itself in the river Otter at a place not within a quarter of a mile of any dwelling. The sewage contains no poisonous or deleterious substance, but far otherwise, for below the sewage exit trout have much grown and increased, and are healthy and thrive. The town of Ottery is under 3,000 inhabitants and over 2,000.
8.—None.

AXE DISTRICT. AXE.

1.—(*a.*), (*b.*), (*c.*) More peal have been taken in tidal waters late in the summer than last year, but generally the take of fish has diminished. Only six salmon were taken up to the commencement of the close time. In May, June, July, and August the water was very low, and nets were not used until 1st June.

2 :—

Salmon.		Trout (migratory).		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
(*a*) 6	54	Peal and sea trout, about 14 cwt.		—	—
(*b*) 1	—	Don't know.		1	—

3.—No new weirs.
4.—No new passes.
5.—No; but it has lately been found that deleterious matter ran into the Axe from the gasworks at Axminster. Steps are taken to prevent this in future.
6.—No; but there can be no doubt that the sewage from the town of Seaton pollutes the estuary.
7 :—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PRIVATE WATERS.			
Draft net - - -	5	5*l.*	2 to 4
Rod - - - -	14	1*l.*	1

8.—None.
9 :—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Fishing with rod and line for salmon without license -	Axminster -	1	—	40*s.* and costs	—

10 :—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
1	—	1

11.—Yes, at Westwater weir. We believe it is.

FROME.

FROME DISTRICT

1.—Diminished.
2.—(*a*) 33 salmon.
3.—None.
4.—Nothing done.
5.—No.
6.—Nothing done.
7 :—

PRIVATE WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Seine net - - -	1	5*l.*	3

10.—None.
11.—Nothing done.

AVON AND STOUR DISTRICT.

1.—(*a.*) Diminished on the Run and the Royalty. (*b.*) A decided increase. The following are the figures:—

Tidal waters.—Run	-	270	as against	380	in 1873
Fresh waters.—Royalty	-	400			
„ Winkton	-	30	„	41	„
„ Sopley	-	22	„	6	„
„ Avon	-	23	„	6	„
„ Bisterne	-	19	(no return in 1873)		
„ Somerley	-	6	as against	6	„
„ Ringwood	-	11	„	6	„
In the River Stour	-	9	„	20	„

2:—

(*a.*) With net - - - - - - -	758
(*b.*) With rod - - - - - - -	14
	772

13½ lbs. has been the average for the fish caught at the mouth of the rivers.

3.—One new weir has been rebuilt at South Charford. The pass has not yet been made according to the promise made by the owner.

4.—A new pass at Bickton has been constructed according to contract. No time to judge of success.

There is a tailboard or apron placed at end of the weir, and large stones at the bottom of the apron.

5.—None that we are aware of.

6.—None.

The greatest pollution is the growth of weeds which in many places not only obstruct the passage of the fish and cause the rivers to silt up, but pollute the river as the weeds decay. There are three or four reaches where the proprietors attend to this and have their river clear; but there seems to be no power to enforce such systematic clearance.

7:—

PUBLIC WATERS.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Net - - - - -	9	3*l.*	4

PRIVATE WATERS.

Net - - - - -	9	3*l.*	4
Rod - - - - -	19	10*s.*	1
Winkton weir or fishing mill dam - - -	1	5*l.*	2
Knapp weir or fishing mill dam - - - - -	1	12*l.*	2

8.—None.
9.—None.
10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
1	—	—

11.—None.

ROTHER.

ROTHER DISTRICT.

2, 3, 4, 5, 6.—No.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Rod - - - - -	2	5s.	1

8, 9.—No.
10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
14	1	15

11.—No.

STOUR.

STOUR (CANTERBURY) DISTRICT.

1.—(*a.*), (*b.*), (*c.*) No salmon or migratory trout have been taken.
2.—See reply to No. 1.
3.—No.
4.—No new pass has been built. The ladder at the White Mill, Sturry, has been taken up by the owners of the mills during some alterations, but it is understood that it will be replaced.
5.—No.
6.—The proprietor of Chartham Paper Mills has taken steps to prevent any hurtful substance from his mills entering the river, and such steps have to a great extent been successful.
7.—None were licensed.
8.—None.
9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Netting without a license, and using a net of illegal mesh.	Sandwich Borough.	—	1	—	—

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
3	1	4

11.—No.

TRENT.

TRENT DISTRICT.

1.—(*a.*), (*b.*), (*c.*) About the same as last year.
2.—It is impossible to answer this question with accuracy, but probably about 2,000 salmon were taken with the net, and a few with the rod; the average weight was 3½ lbs. About 200 or 300 trout were taken.

3, 4.—No.
5.—We believe not.
6.—No; but there is considerable pollution both in the Trent and in its tributary the Derwent.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Stand net - - -	13	1*l.*	1
Draft net - - -	2	5*l.*	3
Rod and line - -	2	10*s.*	1
Private Waters.			
Draft net - - -	14	5*l.*	3
Rod and line - -	7	10*s.*	1

8.—No.
9.—None.
10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
—	3	3

11.—No.

YORKSHIRE DISTRICT.

1.—(*c.*) Increased considerably.
2.—(*a.*), (*b.*):—

Salmon.		Trout (migratory.)		Total.	
No.	lbs.	No.	lbs.	No.	lbs.
3,672 8	49,187 102	289 —	1,170 —	3,961 8	50,307 102
3,680	49,289	289	1,170	3,969	50,409

3.—None.
4.—One has been erected at Flint Mill near Tadcaster. It is just completed and its success or otherwise has not yet been tested.
5.—None; but a tan-yard at Otley has been materially enlarged and the pit water holding lime and animal matter in suspension has increased in volume and the whole of it is discharged into the Wharfe at the foot of Otley Bridge, and is very offensive at times.
6.—None.
7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Public Waters.			
Draft net - - -	7	5*l.*	3
Bow net - - -	3	1*l.*	1

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PRIVATE WATERS.			
Draft net - - -	30	5*l.*	3
Drift net - - -	2	7*l.*	3
Do. - - -	2	6*l.*	3
Rod - - - -	13	1*l.*	1

8.—Two producing 3*l.*

9:—

FIRST OFFENCE.

Nature of Offence.	Name of bench before which case was tried.	Convicted.	Acquitted.	Penalty if convicted.	Causes of failure.
Having 13 unclean salmon in his possession.	Petty Sessions at Selby.	1	—	1*l.* for each fish, and 1*l.* 8*s.* costs, total 14*l.* 8*s.*	
Offering for sale unseasonable salmon.	Petty Sessions at Wetherby.	1	—	1*l.* and 9*s.* costs.	
Offering for sale unclean salmon.	Petty Sessions at Tadcaster.	1	—	1*l.* and 1*l.* 1*s.* 6*d.* costs.	

10:—

WATER BAILIFFS.

Permanent.	Temporary.	Total.
1	1	2

11.—None.

TEES.

TEES DISTRICT.

1.—(*a.*) (*b.*) (*c.*) Diminished.

2.—No.

3, 4, 5, 6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Draft or hang net - -	11	5*l.*	2
Do. - -	11	7*l.* 10*s.*	2
Do. - -	3	7*l.*	2
Do. - -	1	6*l.* 10*s.*	2
PRIVATE WATERS.			
Draft or hang net - -	21	5*l.*	2
Pole or rake net - -	1	5*l.*	1
Lock or crib - -	1	12*l.*	1
Rod and line - -	88	1*l.* 5*s.*	1

8.—No.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
First Offence.					
Using a gaff hook	Greta Bridge Petty Sessions.	4	—	One 2*l.*, three 5*l.*	—
Illegal taking of salmon	„	6	—	Three 5*l.*, two 3*l.* one 2*l.*	—
Attempting to take salmon	„	2	—	10*s.*	—
Taking salmon with a net	„	1	—	1*l.* 10*s.*	—
Using a gaff hook	„	2	—	2*l.*	—
Omitting to close a sluice	„	—	1	—	—
Catching salmon within 100 yards of mill dam	Darlington Petty Sessions.	1	1	6*l.* and costs	Alibi proved.
Fishing during weekly close time	„	1	1	6*l.* and costs	Alibi proved.
Aiding and abetting in committing breach of sec. 17. 36 & 37 Vict. c. 71. s. 41	„	1	—	3*l.* and costs	—
Aiding and abetting in committing breach of 24 & 25 Vict. c. 109. sec. 21	„	1	—	3*l.* and costs	—
Fishing without license	Guisbro' Petty Sessions.	1	—	2*l.* 11*s.* and costs 12*s.*	—
Taking salmon without license	Langbaurgh North Petty Sessions.	1	—	4*l.* 6*s.*	—
Attempting to take salmon with illegal nets	Stockton Petty Sessions.	2	—	12*s.* 9*d.* and costs.	—

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
4	Other officers are occasionally employed as required from time to time.	

11.—No.

TYNE DISTRICT.

Tyne.

1.—Diminished on account of the over-fishing with hang-nets at the mouth of the river, and at sea. Diminished from 86,792 in 1873, to 21,746 in 1874.

2:—

	Salmon.		Trout (migratory).		Total.	
	No.	lbs.	No.	lbs.	No.	lbs.
(*a.*)	21,746	217,460	—	—	21,746	217,460
(*b.*)	Not known.		—	—		
Total	21,746	217,460	—	—	21,746	217,460

This account is for sea fishing only. We have no account of the river fishing

3.—No.

4.—The Salmon pass at Warden Mill has undergone some alteration, which appears to make it very successful. The secondary dam at Chollerford has undergone a little alteration, which has also proved successful.

5.—None; but a great amount of poisonous matter flows into the river Tyne from the different factories, especially from the soda factory at Jarrow Slake, and these are very deleterious to the Salmon which congregate there.

6.—No.

7:—

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
PUBLIC WATERS.			
Draft nets - - -	132	5*l.* per 400 yards, and 1*l.* for every additional 40 yards, or part thereof.	3 or 4.
PRIVATE WATERS.			
Draft net - - -	26	As above.	3 or 4.
Rod and line - -	192	1*l.*	1

8.—Yes. Six were issued, which produced 18*l.*

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
FIRST OFFENCE.					
Killing 10 unseasonable salmon in Reed water -	Kirkwhelpington.	2	—	5*l.* including costs.	
Assaulting water bailiff -	„	—	1	—	Not proved.
Fishing with an illegal instrument - - -	Tynemouth.	—	2	Withdrawn on payment of costs.	
Fishing with a fixed engine, at sea - - -	„	3	1	2*l.* and costs.	Being there for pleasure.
Refusing to produce license	„	2	—	5*s* „	
Fishing in weekly close time with nets, at sea - -	Sth. Shields.	6	—	1*l.* „	
Fishing for salmon without a license, at sea - -	„	—		—	Not having documents to prove fishery district.
Killing salmon without a license - - -	Moot Hall.	2	—	11*l.* and costs.	
Fishing for salmon in weekly close time - - -	„	—	2	—	Withdrawn on account of 2nd offence in one day.
Fishing for salmon with nets too small in mesh, at sea -	„	1	—	1*l.* and costs.	
Fishing for salmon with an illegal instrument, at sea -	„	1	—	2*l.* 10*s.* „	
Having in possession an unseasonable salmon - - -	Bedlington.	1	—	1*l.* 10*s.* „	
Killing an unseasonable salmon - - -	Bellingham.	3	—	13*s.* „	

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.	Cause of failure.
Second Offence.					
Killing salmon in weekly close time - - -	Moot Hall.	—	1	—	Withdrawn.
Fishing with nets too small in mesh - - -	„	1	—	1*l.* and costs.	
Third Offence.					
Killing salmon without a license - - -	Moot Hall.	1	—	15*l.* and costs.	
Killing salmon with an illegal instrument - - -	„	1	—	2*l.* 10*s.* „	

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
1 police sergeant. 3 additional constables. 3 water bailiffs.	1 water bailiff employed during spawning season.	8

11.—None.

COQUET DISTRICT.

1.—Increased at the Warkworth fishery.

	Trout (migratory). Weight.
2.—(*a.*), with net - - - - - - -	4,460 lbs.

The above figures are confined to the fishery at Warkworth, and are supplied by Mr. Pape, the lessee. No estimate can be formed of the number of fish caught by fishermen with nets. The trout average about 3 lbs. a fish.

3.—None.

4.—The fish pass at Felton has been altered by Mr. Riddell, the proprietor.

5.—No.

6.—No steps were taken.

7:—

Public Waters.

Name of Instrument.	Number licensed.	Rate at which licensed.	No. of Men required to work each.
Net - - - -	21	5*l.*	3

Private Waters.

Rod and line - -	185	5*s.* and 1*l.*	1

The scale of licence duties resolved upon by the Board having been disallowed by the Secretary of State, and the byelaws containing the forms of licences to be granted having been confirmed by him, some confusion of a necessity arose.

All the net licenses are assumed to have fished in public waters, though as a matter of fact they may have fished at times within low-water mark on the coast, which is claimed as private water.

8.—No general licences were issued.

9:—

Nature of Offence.	Name of Bench before which case was tried.	Convicted.	Acquitted.	Penalty, if convicted.
First Offence.				
Unlawfully using a light for catching salmon	Rothbury	1	—	1*l.* and 11*s.* 6*d.* costs.
Unlawfully catching salmon	„	1	—	2*l.* „ „
Using a spear	„	1	—	1*l.* „ „
Using a light	„	1	—	1*l.* „ „
Killing trout during close season	Alnwick	4	—	1*s.* and 2*s.* costs.

10:—

Water Bailiffs.

Permanent.	Temporary.	Total.
1	—	1

Besides the additional constable, who is a paid water bailiff, a number of the riparian proprietors' gamekeepers and others hold appointments as water bailiffs.

11.—None.

Table No. I.—Comparative Return of the Total Amount of License Duties on Instruments used for the Capture of Salmon in the Years 1873–74.

District.	1873.										1874.										District.
	Nets, &c.		Rods.		General Licenses.		Total.				Nets, &c.		Rods.		General Licenses.		Total.				
	Men.	Amount.	Men.	Amount.	No.	Amount.	Men.	Amount.			Men.	Amount.	Men.	Amount.	No.	Amount.	Men.	Amount.			
		£ s. d.		£ s. d.		£ s. d.		£ s. d.				£ s. d.		£ s. d.		£ s. d.		£ s. d.			
Eden	232	300 0 0	151	126 7 6	1	35 0 0	383	461 7 6			239	299 0 0	185	166 5 0	1	35 0 0	424	500 5 0			Eden.
Kent	87	75 0 0	140	70 0 0	3	15 0 0	177	160 0 0			46	90 0 0	131	65 10 0	4	20 0 0	177	175 10 0			Kent.
Lune	117	254 0 0	87	87 0 0	3	25 0 0	204	366 0 0			97	218 0 0	81	81 0 0	4	40 0 0	178	339 0 0			Lune.
Ribble	165	301 0 0	326	326 0 0	3	17 10 0	491	644 10 0			146	275 0 0	357	357 0 0	8	72 10 0	503	704 10 0			Ribble.
Dee	181	279 0 0	64	64 0 0	—	—	245	343 0 0			167	264 5 0	87	79 15 0	—	—	254	344 0 0			Dee
Clwyd and Elwy	14	24 10 0	63	63 0 0	—	—	77	87 10 0			16	24 10 0	60	60 0 0	—	—	76	84 10 0			Clwyd and Elwy.
Conway	19	27 0 0	169	28 0 0	—	—	188	55 0 0			19	26 0 0	119	25 18 0	—	—	138	51 18 0			Conway.
Seiont	12	15 0 0	22	22 0 0	—	—	34	37 0 0			26	40 0 0	28	28 0 0	—	—	54	68 0 0			Seiont.
Dwyfach	—	—	—	—	—	—	—	—			—	—	6	6 0 0	—	—	6	6 0 0			Dwyfach.
Dovey	26	56 0 0	118	101 5 6	—	—	144	157 5 6			24	57 0 0	127	131 0 0	—	—	151	188 0 0			Dovey.
Teify and Ayron	203	191 7 6	44	44 0 0	1	8 0 0	247	243 7 6			206	186 10 0	51	41 1 0	1	8 0 0	257	235 11 0			Teify and Ayron.
Cleddy	6	3 0 0	22	11 11 0	—	—	28	14 11 0			10	5 0 0	25	13 2 6	—	—	35	18 2 6			Cleddy.
Towy	137	167 0 0	97	97 0 0	—	—	234	264 0 0			200	240 0 0	110	110 0 0	—	—	310	350 0 0			Towy.
Ogmore	—	—	—	—	—	—	—	—			4	2 12 6	41	34 2 6	—	—	45	36 15 0			Ogmore.
Rhymney	2	3 0 0	—	—	—	—	2	3 0 0			2	3 0 0	—	—	—	—	2	3 0 0			Rhymney.
Usk	20	131 5 0	177	177 0 0	—	—	197	308 5 0			20	172 5 0	196	196 0 0	—	—	216	368 5 0			Usk.
Wye	148	333 0 0	165	165 0 0	—	—	313	498 0 0			157	349 18 0	154	154 0 0	—	—	311	503 18 0			Wye.
Severn	307	480 15 0	38	19 0 0	1	15 0 0	345	514 15 0			348	583 6 0	41	20 10 0	1	15 0 0	389	618 16 0			Severn.
Avon, Brue, &c.	7	19 10 0	—	—	—	—	7	19 10 0			8	23 7 10	—	—	—	—	8	23 7 10			Avon, Brue, &c.
Taw and Torridge	106	149 0 0	176	92 8 0	—	—	282	241 8 0			128	180 0 0	165	86 12 6	—	—	293	266 12 6			Taw and Torridge.
Camel	12	12 0 0	59	11 19 0	—	—	71	23 19 0			28	28 0 0	29	5 5 0	—	—	57	33 5 0			Camel.
Fowey	36	18 0 0	6	1 10 0	—	—	42	19 10 0			25	12 16 0	11	2 15 0	—	—	36	15 11 0			Fowey.
Tamar and Plym	8	7 0 0	193	72 7 6	—	—	201	79 7 6			16	14 0 0	188	70 10 0	—	—	204	84 10 0			Tamar and Plym.
Avon and Erme	22	31 0 0	33	33 0 0	—	—	55	64 0 0			22	31 0 0	24	24 0 0	—	—	46	55 0 0			Avon and Erme.
Dart	68	85 0 0	48	46 2 6	—	—	116	131 2 6			88	110 0 0	36	34 15 0	—	—	124	144 15 0			Dart.
Teign	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—			Teign.
Exe	7	10 10 0	1	0 7 6	—	—	8	10 17 6			10	14 0 0	5	1 17 6	—	—	15	15 17 6			Exe.
Otter	—	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—			Otter.
Axe	18	30 0 0	14	14 0 0	—	—	32	44 0 0			15	25 0 0	14	14 0 0	—	—	29	39 0 0			Axe.
Frome	3	5 0 0	—	—	—	—	3	5 0 0			3	5 0 0	—	—	—	—	3	5 0 0			Frome.
Avon and Stour	80	60 0 0	19	19 0 0	—	—	99	79 0 0			76	71 0 0	19	9 10 0	—	—	95	80 10 0			Avon and Stour.
Rother	—	—	2	0 10 0	—	—	2	0 10 0			—	—	2	0 10 0	—	—	2	0 10 0			Rother.
Stour	4	5 0 0	—	—	—	—	4	5 0 0			—	—	—	—	—	—	—	—			Stour.
Trent	52	80 0 0	12	6 0 0	—	—	64	86 0 0			61	93 0 0	9	4 10 0	—	—	70	97 10 0			Trent.
Wharfe	69	115 0 0	21	21 0 0	2	4 2 0	90	140 2 0			126	214 0 0	13	13 0 0	2	3 0 0	139	230 0 0			Yorkshire.
Derwent	44	72 0 0	—	—	—	—	44	72 0 0													
Tees	100	250 0 0	83	88 0 0	—	—	188	338 0 0			96	287 0 0	88	110 0 0	—	—	184	397 0 0			Tees.
Tyne	665	950 0 0	190	190 0 0	6	24 0 0	855	1,164 0 0			553	925 0 0	192	192 0 0	6	18 0 0	745	1135 0 0			Tyne.
Coquet	63	110 0 0	34	34 0 0	—	—	97	144 0 0			63	105 0 0	185	57 0 0	—	—	248	162 0 0			Coquet.
Total	2,930	4,649 17 6	2,579	2,031 8 6	20	143 12 0	5,569	6,824 18 0			3,045	4,974 10 4	2,779	2,195 15 0	27	211 10 0	5,824	7,381 15 4			

TABLE No. II.—SUMMARY of the NUMBER of NET and ROD FISHERMEN employed, and of the AMOUNT raised in LICENSE DUTIES in England and Wales in the Years 1867–74.

Year.	Number of			Total Men.*	Revenue from			Total Revenue.
	Net Fishermen.	Rod Fishermen.	General Licenses.		Nets.	Rods.	General Licenses.	
					£	£	£	£
1867	3,029	2,350	39	5,379	3,851	1,816	430	6,097
1868	3,913	2,076	29	5,989	4,921	1,593	330	6,844
1869	3,083	2,030	24	5,113	4,826	1,420	320	6,566
1870	2,977	1,616	23	4,593	4,757	1,240	269	6,266
1871	3,383	2,054	26	5,437	5,370	1,469	307	7,146
1872	2,907	2,310	24	5,217	4,552	1,589	312	6,453
1873	2,990	2,579	20	5,348	4,650	2,031	143	6,824
1874	3,045	2,779	27	5,824	4,974	2,196	211	7,381

NOTE.—The numbers for the years previous to 1870 have, for the purposes of comparison, been corrected, by the addition, to each, of the figures returned for the Eden District in 1870, the first year in which licenses were issued in that district.

* Exclusive of men employed by holders of "general licenses."

TABLE No. III.—TABLE of DISTRICTS in which there has been an INCREASE in the NUMBER of MEN employed in NET FISHING, and in the AMOUNT received for NET LICENSES in 1873–74.

District.	1873.				1874.				Increase.			
	Men.	Amount.			Men.	Amount.			Men.	Amount.		
		£	s.	d.		£	s.	d.		£	s.	d.
Kent	37	75	0	0	46	90	0	0	9	15	0	0
Clwyd and Elwy	14	24	10	0	16	24	10	0	2	—		
Seiont	12	15	0	0	26	40	0	0	14	25	0	0
Cleddy	6	3	0	0	10	5	0	0	4	2	0	0
Towy	137	167	0	0	200	240	0	0	63	73	0	0
Ogmore	—	—			4	2	12	6	4	2	12	6
Usk	20	131	5	0	20	172	5	0	—	41	0	0
Wye	148	333	0	0	157	349	18	0	9	16	18	0
Severn	307	480	15	0	348	583	6	0	41	102	11	0
Avon, Brue, &c.	7	19	10	0	8	23	7	10	1	3	17	10
Taw & Torridge	106	149	0	0	128	180	0	0	22	31	0	0
Camel	12	12	0	0	28	28	0	0	16	16	0	0
Tamar and Plym	8	7	0	0	16	14	0	0	8	7	0	0
Dart	68	85	0	0	88	110	0	0	20	25	0	0
Exe	7	10	10	0	10	14	0	0	3	3	10	0
Trent	52	80	0	0	61	93	0	0	9	13	0	0
Yorkshire	113	187	0	0	126	214	0	0	13	27	0	0
Total	1,054	1,779	10	0	1,292	2,183	19	4	238	404	9	4

TABLE No. IV.—TABLE of DISTRICTS in which there has been an INCREASE in the NUMBER of MEN employed in NET FISHING, but a DECREASE in the AMOUNT received for NET LICENSES in 1873–74.

District.	1873.				1874.				Increase.	Decrease.		
	Men.	Amount.			Men.	Amount.			Men.	Amount.		
		£	s.	d.		£	s.	d.		£	s.	d.
Eden - -	232	300	0	0	239	299	0	0	7	1	0	0
Teify and Ayron	203	191	7	6	206	186	10	0	3	4	17	6
Total -	435	491	7	6	445	485	10	0	10	5	17	6

TABLE No. V.—TABLE of DISTRICTS in which there has been a DECREASE in the NUMBER of MEN employed in NET FISHING, but an INCREASE in the AMOUNT received for NET LICENSES in 1873–74.

District.	1873.				1874.				Decrease.	Increase.		
	Men.	Amount.			Men.	Amount.			Men.	Amount.		
		£	s.	d.		£	s.	d.		£	s.	d.
Dovey - -	26	56	0	0	24	57	0	0	2	1	0	0
Avon and Stour	80	60	0	0	76	71	0	0	4	11	0	0
Tees - -	100	250	0	0	96	287	0	0	4	37	0	0
Total - -	206	366	0	0	196	415	0	0	10	49	0	0

TABLE No. VI.—TABLE of DISTRICTS in which there has been a DECREASE in the NUMBER of MEN employed in NET FISHING, and in the AMOUNT received for NET LICENSES in 1873–74.

District.	1873.				1874.				Decrease.			
	Men.	Amount.			Men.	Amount.			Men.	Amount.		
		£	s.	d.		£	s.	d.		£	s.	d.
Lune - -	117	254	0	0	97	218	0	0	20	36	0	0
Ribble - -	165	301	0	0	146	275	0	0	19	26	0	0
Dee - - -	181	279	0	0	167	264	5	0	14	14	15	0
Conway - -	19	27	0	0	19	26	0	0	—	1	0	0
Fowey - -	36	18	0	0	25	12	16	0	11	5	4	0
Axe - -	18	30	0	0	15	25	0	0	3	5	0	0
Stour - -	4	5	0	0	—	—			4	5	0	0
Tyne - -	665	950	0	0	553	925	0	0	112	25	0	0
Coquet - -	63	110	0	0	63	105	0	0	—	5	0	0
Total - -	1,268	1,974	0	0	1,085	1,851	1	0	183	122	19	0

In the seven other districts, viz., the Dwyfach, the Rhymney, the Avon and Erme, the Teign, the Otter, the Frome, and the Rother, the figures for net licenses in the two years are identical.

TABLE No. VII.—TABLE of DISTRICTS in which there has been an INCREASE in the NUMBER of ROD LICENSES issued, and in the AMOUNT received for them in the Years 1873–74.

District.	1873.		1874.		Increase.	
	Rods.	Amount.	Rods.	Amount.	Rods.	Amount.
		£ s. d.		£ s. d.		£ s. d.
Eden - -	151	126 7 6	185	166 5 0	34	39 17 6
Ribble - -	326	326 0 0	357	357 0 0	31	31 0 0
Dee - -	64	64 0 0	87	79 15 0	23	15 15 0
Seiont - -	22	22 0 0	28	28 0 0	6	6 0 0
Dwyfach - -	—	—	6	6 6 0	6	6 6 0
Dovey - -	118	101 5 6	127	131 0 0	9	29 14 6
Cleddy - -	22	11 11 0	25	13 2 6	3	1 11 6
Towy - -	97	97 0 0	110	110 0 0	13	13 0 0
Ogmore - -	—	—	41	34 2 6	41	34 2 6
Usk - -	177	177 0 0	196	196 0 0	19	19 0 0
Severn - -	38	19 0 0	41	20 10 0	3	1 10 0
Fowey - -	6	1 10 0	11	2 15 0	5	1 5 0
Exe - -	1	0 7 6	5	1 17 6	4	1 10 0
Tees - -	88	88 0 0	88	110 0 0	—	22 0 0
Tyne - -	190	190 0 0	192	192 0 0	2	2 0 0
Coquet - -	34	34 0 0	185	57 0 0	151	23 0 0
Total - -	1,334	1,258 1 6	1,684	1,505 13 6	350	247 12 0

TABLE No. VIII.—TABLE of DISTRICTS in which there has been an INCREASE in the NUMBER of ROD LICENSES issued, but a DECREASE in the AMOUNT received for them in the Years 1873–74.

District.	1873.		1874.		Increase.	Decrease.
	Rods.	Amount.	Rods.	Amount.	Rods.	Amount.
		£ s. d.		£ s. d.		£ s. d.
Teify and Ayron -	44	44 0 0	51	41 1 0	7	2 19 0

TABLE No. IX.—TABLE of DISTRICTS in which there has been a DECREASE in the NUMBER of ROD LICENSES issued, and in the AMOUNT received for them in the Years 1873–74.

District.	1873.				1874.				Decrease.			
	Rods.	Amount.			Rods.	Amount.			Rods.	Amount.		
		£	s.	d.		£	s.	d.		£	s.	d.
Kent - -	140	70	0	0	131	65	10	0	9	4	10	0
Lune - -	87	87	0	0	81	81	0	0	6	6	0	0
Clwyd and Elwy	63	63	0	0	60	60	0	0	3	3	0	0
Conway - -	169	28	0	0	119	25	18	0	50	2	2	0
Wye - -	165	165	0	0	154	154	0	0	11	11	0	0
Taw and Torridge	176	92	8	0	165	86	12	6	11	5	15	6
Camel - -	59	11	19	0	29	5	5	0	30	6	14	0
Tamar and Plym	193	72	7	6	188	70	10	0	5	1	17	6
Avon and Erme	33	33	0	0	24	24	0	0	9	9	0	0
Dart - -	48	46	2	6	36	34	15	0	12	11	7	6
Avon and Stour	19	19	0	0	19	9	10	0	—	9	10	0
Trent - -	12	6	0	0	9	4	10	0	3	1	10	0
Yorkshire -	21	21	0	0	13	13	0	0	8	8	0	0
Total -	1,185	714	17	0	1,028	634	10	6	157	80	6	6

In the eight other districts, viz., the Rhymney, the Avon Brue and Parret, the Teign, the Otter, the Axe, the Frome, the Rother, and the Stour, the figures for rod licenses in the two years are identical.

APPENDIX IV.—Revenue and Expenditure.

Dr. Table No. I.—Abstract of Accounts of various Boards of Conservators

	District.	1 To Revenue from Licenses.	2 To Penalties.	3 To Voluntary Subscriptions.	4 To Interest of Stock or Rent of Property, or Bankers' Interest.	5 To Miscellaneous Receipts.	6 Total Receipts.	
		£. s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1	Eden	500 5 0	35 10 0	30 0 0	6 4 4	13 15 1	585 14 5	1
2	Kent	175 10 0	16 1 0	—	2 13 8	0 0 6	194 5 2	2
3	Lune	337 0 0	7 7 6	1 0 0	—	—	345 7 6	3
4	Ribble	704 10 0	7 15 0	—	10 5 9	2 5 9	724 16 6	4
5	Dee	344 0 0	19 11 9	—	—	0 15 0	364 6 9	5
6	Clwyd and Elwy	84 2 6	7 7 5	39 4 0	8 6	34 8 6	165 10 11	6
7	Conway	51 18 0	—	—	—	—	51 18 0	7
8	Seiont	35 10 0	4 0 0	61 9 0	—	1 0 0	101 19 9	8
9	Dwyfach	6 6 0	0 15 0	116 11 9	—	13 12 0	137 4 9	9
10	Dovey	188 0 0	—	—	—	—	188 0 0	10
11	Teify	235 11 0	35 0 0	—	—	—	270 11 0	11
12	Cleddy	18 2 6	3 0 0	26 19 6	—	—	48 2 0	12
13	Towy	350 0 0	21 11 6	18 0 0	—	3 0 0	392 11 6	13
14	Ogmore	36 15 0	—	—	—	0 6 8	37 1 8	14
15	Rhymney	3 0 0	—	17 0 0	—	—	20 0 0	15
16	Usk	361 5 0	61 15 8	139 11 0	4 19 2	340 17 11	908 8 9	16
17	Wye	503 18 0	5 0 0	—	—	—	508 18 0	17
18	Severn	618 16 0	10 3 6	4 4 0	—	—	633 3 6	18
19	Avon Brue, &c.	23 7 10	8 18 0	—	—	—	32 5 10	19
20	Taw and Torridge	266 12 6	71 0 0	—	—	0 7 0	337 19 6	20
21	Camel	33 5 0	9 5 0	24 13 0	—	—	67 3 0	21
22	Fowey	15 11 0	—	5 1 0	—	—	20 12 0	22
23	Tamar and Plym	84 10 0	—	20 0 0	—	—	104 10 0	23
24	Avon and Erme	55 0 0	27 0 0	—	—	11 3 0	93 3 0	24
25	Dart	144 15 0	12 8 0	—	—	34 3 6	191 6 6	25
26	Teign	—	—	—	—	0 16 6	0 16 6	26
27	Exe	15 17 6	—	—	—	—	15 17 6	27
28	Otter	—	—	—	—	—	—	28
29	Axe	39 0 0	2 0 0	—	—	—	41 0 0	29
30	Frome	5 0 0	—	—	—	—	5 0 0	30
31	Avon and Stour	80 10 0	—	—	—	—	80 10 0	31
32	Rother	0 10 0	—	40 0 0	—	—	40 10 0	32
33	Stour	—	—	—	—	—	—	33
34	Trent	97 10 0	—	—	—	1 2 6	98 12 6	34
35	Yorkshire	230 0 0	8 0 0	—	—	—	238 0 0	35
36	Tees	397 0 0	34 10 0	—	—	0 18 3	432 8 3	36
37	Tyne	1,135 0 0	33 10 11	—	12 9 10	12 7 0	1,193 7 9	37
38	Coquet	162 0 0	1 8 9	—	—	—	163 8 9	38
	Total	7,339 17 10	442 19 0	543 13 8	37 1 8	470 19 2	8,834 10 6	

	£	s.	d.
Total expenditure	8,944	7	3½
Total receipts	8,834	10	6
Excess of expenditure over receipts (see next table)	109	16	9½

APPENDIX IV.—Revenue and Expenditure,

for the Year ended December 31, 1873. *Cr.*

	7 By Salaries for Management.	8 By Printing, &c.	9 By Wages.	10 By Cost of Prosecutions.	11 By Rewards on Convictions.	12 By Construction of Fish Passes.	13 By Other Works.	14 By Miscellaneous Expenditure.	15 Total Expenditure.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
1	43 18 3	5 14 10	485 3 4	2 16 8	—	—	—	7 18 3	545 11 4	1
2	—	14 16 10	207 3 11	15 16 0	—	65 10 7	—	6 4 6	309 11 10	2
3	65 0 0	18 19 7	245 1 8	60 0 8	3 0 0	6 17 0	—	37 17 11	436 16 10	3
4	50 0 0	32 9 6	466 0 0	13 3 6	3 0 0	—	—	121 1 5	685 14 5	4
5	—	12 8 6	359 4 1½	71 10 1	—	—	—	51 11 3½	494 14 0	5
6	—	21 8 5	122 2 6	—	—	—	—	4 0 6	147 11 5	6
7	20 0 0	1 19 6	40 5 0	—	—	—	—	6 1 0	68 5 6	7
8	—	17 4 6	89 18 0	—	1 14 6	—	10 16 3	5 0 0	124 13 3	8
9	—	1 1 0	56 1 6	—	—	—	75 14 6	1 0 9	133 17 9	9
10	20 15 0	15 0 0	—	2 4 6	—	—	—	27 0 0	64 19 6	10
11	15 0 0	30 1 9	177 16 1	16 16 0	16 8 9	—	—	37 2 3	293 4 10	11
12	5 0 0	0 12 6	1 11 0	—	1 0 0	27 14 4	—	—	35 17 10	12
13	30 0 0	14 1 4	274 8 9	1 6 6	0 5 0	—	40 0 0	6 8 7	366 10 2	13
14	—	6 0 0	5 0 0	0 6 8	—	—	—	3 11 10	14 18 6	14
15	—	1 0 0	13 0 0	—	—	—	—	—	14 0 0	15
16	65 8 2	29 14 10	658 0 5	65 2 10	—	22 15 11	—	38 9 3	879 11 5	16
17	54 4 8	36 6 9	379 18 1	7 13 6	—	—	—	29 2 3	507 5 3	17
18	100 0 0	42 2 3	365 13 6	11 18 9	—	25 0 6	17 11 0	69 10 9	631 16 0	18
19	—	3 5 6	3 4 0	—	3 3 0	—	—	4 7 6	14 0 0	19
20	25 0 0	25 0 2	45 0 0	43 17 2	17 0 0	—	—	57 13 3	213 10 7	20
21	5 0 0	2 0 0	23 2 0	—	—	20 0 0	—	—	50 2 0	21
22	—	0 15 6	15 9 6	—	—	—	—	—	16 5 0	22
23	21 0 0	11 18 9	52 0 0	1 6 6	—	—	—	5 5 8	91 10 11	23
24	10 0 0	9 15 6½	60 6 11	25 4 4	7 7 7	—	—	4 9 6	117 3 10½	24
25	10 0 0	6 12 3	177 9 6	15 14 5	—	—	—	13 7 11	223 4 1	25
26	6 5 0	3 11 6	5 6 8	—	—	—	—	0 1 0	15 4 2	26
27	—	0 12 7	5 0 0	—	—	—	—	2 4 0	7 16 7	27
28	—	—	—	—	—	—	—	—	—	28
29	—	—	41 0 0	—	—	—	—	—	41 0 0	29
30	—	—	—	—	—	—	—	—	—	30
31	10 0 0	21 4 6	60 10 0	—	—	—	—	5 6 0	97 0 6	31
32	5 0 0	4 10 9	22 5 4	—	—	—	17 6 0	2 18 7	52 0 8	32
33	—	—	—	—	—	—	—	—	—	33
34	10 0 0	11 3 0	7 9 6	1 10 6	—	—	15 0 0	16 17 11	62 0 11	34
35	26 5 0	29 11 1	105 7 2	0 17 0	—	5 0 0	—	38 14 9	205 15 0	35
36	—	56 10 5	311 19 7	6 15 2	—	—	—	41 2 3	416 7 5	36
37	125 0 0	81 17 10	673 0 11	121 19 2	—	20 2 6	166 16 6	151 14 8	1,340 11 7	37
38	27 1 8	74 5 6	87 18 7	2 14 4	—	—	—	33 13 4	225 13 5	38
	749 17 9	643 16 11½	5,042 17 6½	488 14 3	52 18 10	193 0 10	343 4 3	829 16 10½	8,944 7 3½	

These accounts have been generally rendered for the year ended December 31st, 1874; but in some cases it was found impossible to obtain an exact statement for that particular period, and the account has then been rendered for the last completed twelve months for which the accounts of the Board have been audited.

The receipts in column 1 ought to correspond with the receipts from licenses given in Appendix No. III. which are collected from the official answers to the Inspectors' questions. In some cases, however, they do not do so exactly. The inaccuracy must be due to some confusion in the accounts of the Boards. The Inspectors do not feel themselves justified in rejecting figures which have been rendered to them by the duly constituted authorities, but they hope that care may be taken in future years to make the accounts correspond exactly with the answers to those questions.

TABLE No. II.—ACCOUNT OF THE BALANCES OR DEFICITS OF VARIOUS BOARDS AT THE COMMENCEMENT AND CLOSE OF THE LAST ACCOUNTS.

District.	31st December 1873.*						31st December 1874.*					
	Balance in hand.			Deficit.			Balance in hand.			Deficit.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Eden	150	5	0		—		190	8	1		—	
Kent	212	9	3½		—		97	2	7½		—	
Lune	32	13	2		—			—		58	16	2
Ribble	435	13	5		—		474	15	6		—	
Dee		—		170	15	4		—		301	2	7
Clwyd and Elwy	44	14	2		—		62	13	8		—	
Conway	16	2	0		—			—		0	5	6
Seiont	32	16	5		—		10	2	2		—	
Dwyfach		—			—		3	7	0		—	
Dovey	2	12	9		—		125	13	3		—	
Teify	81	14	9		—		59	0	11		—	
Cleddy		—		9	6	3	2	17	11		—	
Towy	111	6	10		—		137	8	2		—	
Ogmore		—			—		22	3	2		—	
Rhymney	45	7	10		—		51	7	10		—	
Usk	203	8	6		—		232	5	10		—	
Wye	73	9	5		—		75	2	2		—	
Severn		—		44	17	0		—		43	10	3
Avon Brue and Parret	15	18	8		—		34	4	6		—	
Taw and Torridge	331	7	6		—		455	16	5		—	
Camel		—		14	16	4	2	4	8		—	
Fowey		—		10	4	11		—		5	17	11
Tamar and Plym	18	18	8		—		31	17	9		—	
Avon and Erme	17	3	3		—			—		6	17	7½
Dart	136	15	0		—		104	17	5		—	
Teign	14	13	6		—		0	5	10		—	
Exe	11	5	7		—		19	6	6		—	
Otter		—			—			—			—	
Axe		—			—			—			—	
Frome		—		1	8	7	3	11	5		—	
Avon and Stour	42	2	8		—		25	12	2		—	
Rother	6	5	6		—			—		5	5	2
Stour		—			—			—			—	
Trent	50	5	2		—		86	16	9		—	
Yorkshire	34	5	8		—		66	10	8		—	
Tees		—		403	8	10		—		387	8	0
Tyne	699	13	5		—		552	9	7		—	
Coquet	335	4	5		—		272	19	9		—	
Total	3,156	12	6½	654	17	8	3,201	1	8½	809	8	2½

Net Balance 1873 - £2,501 15 3½ — £2,391 18 6

Ditto 1874 - £2,391 18 6

Decrease in 1874 - £109 16 9½

* In some cases the accounts of the Board are not made up to the end of the year, and the balances and deficits given are therefore those which are accounted for up to the date of the last audited accounts of the Board.

The figures for the year 1873 ought to correspond with those published in the Thirteenth Annual Report of the Inspectors. In some instances they do not do so, and the Inspectors hope that care will be taken in future that the accounts may be correctly rendered year by year.

APPENDIX V.

PROTECTION.

TABLE No. I.—COMPARATIVE RETURN of the NUMBER of WATCHERS employed in the various DISTRICTS in 1872–73.

DISTRICT.	1873.			1874.		
	Permanent Watchers.	Temporary Watchers.	Total Watchers.	Permanent Watchers.	Temporary Watchers.	Total Watchers.
Eden	5	1	6	5	2	7
Kent	—	4	4	2	1	3
Lune	4[1]	2	6	3	3	6
Ribble	8	1	9	8	1	9
Dee	No returns.			No returns.		
Clwyd and Elwy	2	—	2	2	—	2
Conway	1	—	1	1	—	1
Seiont	2	3	5	2	7	9
Dwyfach	District not formed.			2	—	2[7]
Dovey	8	2	10	No returns.		
Teify and Ayron	3	2	5	3	2	5
Cleddy	—	1	1	—	1	1
Towy	3	5	8	4	3	7
Ogmore	District not formed.			—	1	1
Rhymney	—	1	1	—	1	1
Usk	9	6	15	10	4	14
Wye	4	13	17	4	12	16
Severn	17	11	28	16	9	25
Avon, Brue, &c.	1	—	1	1	—	1
Taw and Torridge	2	2	4	3	4	7
Camel	—	—	—	1	1	2
Fowey	—	2	2	—	1	1
Tamar and Plym	4	2	6	3	2	5
Avon and Erme	1	2	3	1	4[8]	5
Dart	4	—	4	4	—	4
Teign	—	—	—	—	1	1
Exe	—	1	1	—	1	1
Otter	—	—	—	—	—	—
Axe	1	—	1	1	—	1
Frome	—	—	—	—	—	—
Avon and Stour	1	—[2]	1	1	—	1
Rother	12	—	12	14	1	15
Stour	2	2	4	3	1	4
Trent	1	—[3]	1	—	3	3
Yorkshire	2	1	3	1	1	2
Tees	5	—[4]	5	4	—[9]	4
Tyne	9[5]	1	10	7[10]	1	8
Coquet	1	—[6]	1	1[11]	—[12]	1
	112	65	177	107	68	175

[1] One police constable.
[2] The meadow drowners also received gratuities for care of fish.
[3] Several gamekeepers acted as water-bailiffs.
[4] Number varied.
[5] Six were police constables.
[6] Several gamekeepers acted as water-bailiffs.
[7] Two gamekeepers also act as water-bailiffs.
[8] Two of these are employed by net-licencees.
[9] Others occasionally employed as required.
[10] Four of these are constables.
[11] A constable.
[12] Several gamekeepers also act as water-bailiffs.

TABLE No. II.—SUMMARY of the NUMBER of WATER BAILIFFS employed in SALMON FISHERY DISTRICTS in the Years 1871–72–73–74.

	1871.	1872.	1873.	1874.
Permanent - -	102	101	112	107
Temporary - -	90	79	65	68
Total - -	192	180	177	175

TABLE No. III.—COMPARATIVE RETURN of the NUMBER of PROSECUTIONS and CONVICTIONS under the SALMON FISHERY ACTS in each DISTRICT for the Years 1873–74.

District.	1873.		1874.		Remarks.
	Charges.	Convictions.	Charges.	Convictions.	
Eden - - -	17	14	25	19	
Kent - - -	4	3	3	2	
Lune - - -	8	8	8	8	
Ribble - - -	10	8	6	2	
Dee - - - -	17	12	21	9	
Clwyd and Elwy -	6	5	8	5	
Conway - - -	—	—	—	—	
Seiont - - -	12	9	19	19	
Dwyfach - - -	—	—	—	—	
Dovey - - -	2	2	15	9	
Teify and Ayron -	19	19	18	18	
Cleddy - - -	—	—	2	2	
Towy - - -	10	8	21	21	
Ogmore - - -	—	—	—	—	
Rhymney - - -	—	—	—	—	
Usk - - - -	51	36	37	24	
Wye - - -	14	14	10	9	
Severn - - -	10	10	19	15	
Avon, Brue, &c. -	—	—	6	2	
Taw and Torridge -	18	18	38	32	
Camel - - -	—	—	4	4	
Fowey - - -	—	—	—	—	
Tamar and Plym -	3	3	1	—	
Avon and Erme -	8	8	8	8	
Dart - - -	2	1	18	5*	*and 1 man absconded before service of summons.
Teign - - -	—	—	—	—	
Exe - - - -	—	—	—	—	
Otter - - -	—	—	—	—	
Axe - - -	—	—	1	1	
Frome - - -	—	—	—	—	
Avon and Stour -	—	—	—	—	
Rother - - -	1	—	—	—	
Stour - - -	—	—	1	—	
Trent - - -	7	6	—	—	
Yorkshire - - -	3	3	3	3	
Tees - - -	18	11	26	23	
Tyne - - -	25	21	35	24	
Coquet - - -	1	1	8	8	
	266	220	361	272	

TABLE No. IV.—SUMMARY of the NUMBER of PROSECUTIONS and CONVICTIONS under the SALMON FISHERY ACTS in the Years 1867–8–9–70–1–2–3–4.

——	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
Prosecutions	260	413	381	408	432	318	266	361
Convictions -	197	328	304	343	345	235	220	272

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SALMON FISHERIES (ENGLAND AND WALES).

FOURTEENTH ANNUAL REPORT

OF THE

INSPECTORS OF SALMON FISHERIES (ENGLAND AND WALES).

Presented to both Houses of Parliament by Command of Her Majesty.
(Pursuant to 24 & 25 Vict. c. 109. s. 32.)

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
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FOR HER MAJESTY'S STATIONERY OFFICE.

1875.

FISHERIES (NORFOLK).

REPORT

ON THE

FISHERIES OF NORFOLK,

ESPECIALLY

CRABS, LOBSTERS, HERRINGS, AND THE BROADS,

BY

FRANK BUCKLAND,

INSPECTOR OF SALMON FISHERIES.

(PRESENTED BY HER MAJESTY'S COMMAND.)

Ordered, by The House of Commons, *to be Printed,*
11 *August* 1875.

[*Price* 1 *s.* 6 *d.*]

428. *Under* 6 *oz.*

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REPORT ON THE FISHERIES OF NORFOLK.

4, Old Palace Yard, Westminster, S.W.
9 August 1875.

Sir,

In obedience to your instructions to "Hold an inquiry into the state of the Crab, Lobster, and other Sea-coast Fisheries on the coast of the County of Norfolk, with a view of ascertaining whether it is expedient that they should be placed under regulations adapted to prevent their being wasted, and to preserve them for the future," I have the honour to inform you that I have completed my examination of the fisheries of the County of Norfolk, and beg to submit the following report:—

I have held inquiries at the following places: Yarmouth, Cromer, Lynn, Wells, Norwich, Lowestoft, Ludham, and Horning Ferry.

Although Lowestoft is situated beyond the limits of the county of Norfolk, the Herring fisheries are so identified with those at Yarmouth that my report would not have been complete unless I held an inquiry there also. I therefore held an inquiry at that place, the result of which will be found under the head of Lowestoft Fisheries, at page 11.

I received urgent requests from landed proprietors and other gentlemen interested in the cultivation of the Rivers and Broads of Norfolk to inquire into the condition of these waters. In the course of my investigation I found that besides smelts or sparlings, which periodically migrate into fresh waters, sea trout are found in abundance on the coasts of Norfolk. I considered it essential to discover how far these fish do actually ascend, or might be enabled to ascend, the rivers of that county. I therefore felt it to be my duty to extend my inquiry into, and to report on, the fisheries of the rivers and Broads of Norfolk and Suffolk.

My inquiries have been directed into the cultivation of the following fish:—

Sea Fish.

Trawl fish.	Crabs.
Herrings.	Lobsters.
Mackerel.	Shrimps.
Whiting.	Oysters.
Codling.	Mussels.
Soles (inshore).	Cockles.
	Whelks.

Migratory Fish.

Salmon Trout.	Dabs.
Smelts.	Eels.

Fresh-water Fish.

Carp.	Tench.
Pike.	Bream.
Perch.	Rudd.
Roach.	Dace.

Norfolk is bounded on the south and south-east by Suffolk, from which it is separated by the Waveney and the Little Ouse. On the south and south-west it is bounded by Cambridgeshire, and for a short distance on the west by Lincolnshire. On the north-west it is bounded by the Wash, which separates it from Lincolnshire; and on the east side by the North Sea or German Ocean. The Norfolk coast commences at the estuary of the Yare, and extends in a regular convex outline to the Wash. It is for the most part low, and at the entrance of the Wash are a line of sand hills, locally called Meals, or Marrum Hills, from the "Marrum" *(Arundo Arenaria)* which grows on them.

Norfolk is for the most part very flat, and therefore, unfortunately, unsuited for salmon cultivation. It is said that the Broads, which are drained by the Bure, were part of an estuary, which probably remained till the time of Alfred, or that of Edward the Confessor. There are traditions of the sea having once reached Norwich on the Wensum, and Bungay Castle on the Waveney. I obtained evidence more than once during my inquiry that the sea coast near Yarmouth has been gradually extending, even in our own time. The above remarks are necessary in order fully to understand the distribution of fishes along the coast and inshore.

The sea fauna of this district corresponds to the nature of the soil at the bottom of the ocean. Directly opposite Yarmouth the bottom of the sea is entirely sand. About Cromer there are rocks. The deep and sluggish rivers and Broads contain (or would contain if properly cultivated) large numbers of fish adapted to this kind of habitat. The vast plains of sand opposite Yarmouth are the head-quarters of the herring, which forms such an important item in the British sea-coast fisheries. Crabs and lobsters have their head-quarters in the rocks opposite Cromer. Oysters are of course not found where there is sand. The Norfolk Oyster Fisheries are principally situated in and near the Wash.

The Yarmouth Herring Fishery.

Yarmouth* for eight hundred years past has been celebrated for its Herring fishery. The first records of the fisheries in the North Sea are

* Yarmouth is 123 miles N.E. of London, and 19 miles E. by S. of Norwich. It is situated on a narrow peninsula, nearly a mile in breadth, between the German Ocean and the River Yare. The population of this town has greatly increased during the present century, as in 1801 it had only 16,573 inhabitants; in 1871 they numbered 41,819, but judging by the large number of houses lately erected it may now be fairly estimated at over 46,000 inhabitants. The greatest increase has been during the last 30 years, *i. e.*, since railway communication was established and the fisheries, especially deep-sea trawling, so greatly developed.

are very interesting. We read, "In the days of Canute it was a mere 'sand-bank,' but in Edward the Confessor's time it was just visible at low water. At the commencement of the reign of William the Conqueror it became constantly dry ground, so that fishermen from various parts of England came annually to catch herrings; they built themselves tents for shelter, also to carry on their business of curing, and exhibiting fish for sale, and drying their nets. After some time, finding the fishing likely to prove advantageous, and the sand gradually becoming more safe to build upon, substantial houses were erected; the first tenement is imagined to have been on or near Fuller's Hill, so called from a fisherman of that name. Building thus went on, mostly in the northern direction, being contiguous to the north haven where the principal trade was carried on. A church being erected here gives additional reason for supposing this part of Yarmouth was the first inhabited."

As years rolled on the town continued to increase in prosperity, and soon became the rendezvous of fishermen belonging to other nations bordering on the North Sea, more especially Dutchmen and Frenchmen, who came in immense numbers during the great free fair, which lasted six weeks in the autumn of each year.

In 1617 we find it recorded that the Yarmouth merchants exported 600 lasts of cured herrings, and in 1629 this had increased to 1,000 lasts, or about 10,000 barrels.

In 1760 the fisheries had become so important that the capital embarked in them was estimated at 160,000*l.*; and in the 90 years following this amount was nearly doubled, being 316,000*l.* in the year 1850. The last 25 years, however, has shown the greatest progress of all, as the total value of luggers, trawling smacks, and other vessels, with the various buildings on shore belonging to the herring and trawling fisheries, is supposed to be little short of three quarters of a million sterling at the present time.

I am indebted to Mr. G. T. Watson, superintendent of the Sailors' Home, and Mr. John Bates, for the following statistics of fishing vessels belonging to Yarmouth and Gorlestone:—

First class, over 15 tons, luggers and smacks - -	512
Second class, over 2 tons and under 15 tons - -	459
Total -	971

Mr. Watson and Mr. Bates state that the crews of these vessels would average eight hands.* There are also 37 small boats, with an average of 2 men, and about 120 Scotch and West Country vessels, which land their fish in Yarmouth Harbour during the herring season.

So

* *Note.*—The crew of a Yarmouth boat are thus denominated: Master, mate, oarsman or hawsman, whaleman, net-rope man, net-stower, all-work man or youngster, capstan men (three or four), boy.

So that there are employed in the Yarmouth fisheries:—

	Vessels.	Men and Boys.
First and Second Class Boats - -	971	7,768
Small Boats - - - - -	37	74
Scotch and West Country Boats - -	120	1,000
	1,128	8,842

I visited the Fishermen's Hospital, where a number of aged North Sea fishermen reside, in order to obtain evidence of the present condition of the herring fishery as compared with its state in former years.

I was fortunate enough to obtain evidence from Mr. Silvers, aged 85, and from Mr. Coleby, aged 71, who had both served nearly the whole of their lives, boy and man, in the North Sea. The answer from both of these veterans was that there are "as many if not more herrings caught now than 70 and 80 years ago;" and this in spite of the increased number of boats and nets.

I ascertained from a gentleman connected with the herring trade, that of late years the number of boats and men has greatly increased, and that the depth and length of the nets have also been augmented; 14 years ago there used to be about 15 yards on a rope; now an ordinary net is from 18 to 20 yards on the rope. Fourteen years ago the boats used to fish from 61 to 91 nets each; now they fish from 101 to 161 nets.

Many boats now fish with nets one mile and one-third long; some boats have been known to use nearly two miles of nets. Mr. De Caux calculates that, during the months of September, October, and November, it would be well within the mark to state that there are fishing for herrings every favourable night in the North Sea between five and six thousand miles of netting.*

RETURN of WEIGHT of FISH carried from Great Eastern Railway Stations, 1860-1874.

	1860.	1861.	1862.	1863.	1864.	1869.	1870.	1871.	1872.	1873.	1874.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Yarmouth	20,399	27,222	28,846	31,947	34,432	22,764	26,894	31,898	27,400	27,864	27,517
Lowestoft	13,030	12,436	11,728	15,685	17,540	15,002	19,238	23,792	18,788	21,785	23,861
Harwich -	1,507	1,830	1,690	2,071	1,931	2,011	1,678	1,710	1,903	2,014	2,509

The railway books containing the returns from 1865 to 1868 were destroyed by fire.

I have

* Formerly the herring nets were made of twine; of recent years they are nearly all made of cotton. Cotton is much softer, and fishes better than twine.

I have also ascertained that, in addition to the above, about 20,000 tons of trawl fish are sent to Billingsgate every year by carrying cutters and steamers from the Yarmouth fleets of trawling vessels in the North Sea. This would give 47,864 tons from Yarmouth alone, and including Lowestoft and Harwich, 74,234 tons of fish. To this may be added a very large quantity sent by steamers to London, Newcastle, Hull, &c., and many shiploads exported to ports in the Mediterranean.

Kippered Herrings.

A very important trade, that of kippering herrings, has, during the last few years, been introduced into Yarmouth, mainly through the energy and enterprise of Mr. John Woodger, who has kindly given most important information during my inquiry.

Herrings for kippering must be of the very best quality, and no salt is used in this process. The entrails of the fish are taken out, they are then carefully washed and hung up in the smoking houses for a few hours.

Large numbers of women are employed by the kipper merchants, and it is supposed that more than 1,000 lasts of herrings are now yearly required for this trade alone.

Mr. George Jay, fish wharf master at Yarmouth, gives me the following information relative to herrings landed at the wharf:—

	*Lasts.**	
1872 - - -	14,451	From 23rd August to 21st December.
1873 - - -	18,806	
1874 - - -	17,736	

Mr. Jay thinks that probably over 1,000 lasts in each year may be added to this for herrings landed at Gorlestone and other parts of Yarmouth Harbour.

In 1873 there were landed at Yarmouth and Lowestoft, including the spring and autumnal fishing—

Lasts of herrings - - - 32,000

There are in each last of herrings *13,200 individual fish.* The total number, therefore, of herrings caught in 1873 amounts to *422,400,000,* or nearly *four hundred and twenty-three millions* of herrings.

Take these herrings at a halfpenny each when cured, and sold in the retail market, we shall find the value of the herrings caught in one year by fishing vessels, sailing out of Yarmouth and Lowestoft to be over 875,000 *l.*

Mr.

* It is estimated that a last of freshly-caught herrings weighs about two tons.

† *Analysis of Dried Herrings.*—Dried herrings contain, in 1 lb., carbon 1,435 grains; nitrogen 217 grains. Fresh meat averages, 1 lb., carbon 2,580 grains; nitrogen 160 grains.—*Evidence of Dr. Edward Smith during Cotton Famine.* Vide *Nall,* 362.

Mr. J. G. Nall, in 1866, estimated the entire capital embarked in the Yarmouth fisheries, including trawling vessels, to be about 600,000 *l.*; this has since much increased. The value of the capital embarked in the Lowestoft fisheries is also very large.

The herring fisheries in Yarmouth and Lowestoft may therefore be truly said to be of national importance; the herrings alone would give about 14 meals† in the year to every man, woman, and child in the United Kingdom, allowing one fish to a meal.

If to the herring fisheries we add the products of the trawling vessels, England ought to be truly grateful to Providence for this most splendid reaping of the "Harvest of the sea."

A question of considerable importance to the English herring fisheries came before me. It was given in evidence that the Scotch boats come in numbers for the autumnal herring fishery off the coast of Norfolk and Suffolk; the rudders of some of these boats project considerably below the level of the keel; the consequence is that these boats with deep rudders, in the darkness of the night, get the iron and woodwork connected with the rudder entangled among the herring nets as these vessels sail over them. The nets are then dragged away out of their proper fishing position, and often cut in two, or even entirely lost. Mr. Small, secretary to a fishing lugger association in Lowestoft, informed me that the fishermen whom he represented complained very bitterly of the mischief done to the nets of the Lowestoft fishermen by the rudders of the Scotch fishing boats. He has communicated with Lord Mahon upon the subject, and was informed that the Lowestoft and Yarmouth herring fishermen had a remedy against the Scotchmen and others for injury done to their nets, by putting in force Sections 13 and 14, Sea Fisheries Act, 31 & 32 Vict. c. 45, which read as follows:—

"13. If within the exclusive fishery limits of the British Islands any person, or if outside of those limits any person belonging to a sea fishing boat, which is either British or French, acts in contravention of Articles 12, 15, 16, 17, 19, 20, and 21 of the first Schedule to this Act, or any of them, or causes injury to any person in any one or more of the following ways, namely, by assaulting any one belonging to another sea-fishing boat, or by causing damage to another sea-fishing boat, or to any property on board thereof or belonging thereto, such person shall be deemed to have committed an offence against the fishery regulations of this Act.

"14. Every person who has committed an offence against the fishery regulations of this Act within the exclusive fishery limits of the British Islands, and every person belonging to a British sea-fishing boat who has committed an offence against those regulations outside of those limits, shall be liable to a penalty of not less than eight shillings and not more than fifty pounds, or, in the discretion of the court, to imprisonment for not less than two days and not more than three months, with or without hard labour.

"If the offence is one by which some injury has been caused in any of the ways before mentioned, the court may order the offender to pay, in addition to any penalty, a reasonable sum as compensation to the person injured, which sum may be recovered in the same manner as a penalty under this Act."

Mr.

Mr. Small assured me that as far as the case then under consideration was concerned, these clauses were practically inoperative, inasmuch as it was perfectly impossible to identify the boats, much less the men employed upon them, in the darkness of the night. He proposed that an Order in Council should be made that herring boats fishing in waters frequented by Lowestoft or Yarmouth fishermen should be compelled to abolish entirely these deep rudders, so that no injury should be done to herring nets. I have put myself in communication with the Board of Trade and Commissioners of the Scotch Herring Fisheries on this point, and have received the following letter from the Secretary to the Scotch Fishery Board:—

"Vigilant," Fishery Cruiser,
Sir, Granton, 20th July 1875.

In reply to your letter of 16th instant, No. 27, enclosing copy letter from Mr. Frank Buckland relative to evidence given at Lowestoft, "that Scotch fishing boats are fitted with rudders which come a long way *below* the keel, and that these rudders frequently cut asunder, and otherwise injure, the nets of English fishermen off Lowestoft and Yarmouth," I beg to state that Scotch drift net fishing boats are not fitted with rudders coming a long way *below* the keel, but generally on a level with it. There are, however, many cases in which the stern-post is considerably rounded off, and where their rudders do not fit quite close, and it cannot be denied that those boats in passing over nets (floating on the surface) do damage occasionally.

Surface drift net fishing, as carried on at Lowestoft and Yarmouth, is exposed to many risks, and it is quite evident that the statement made to Mr. Buckland at the former place, in regard to damage done by Scotch fishing boats, is greatly exaggerated. It must be trifling indeed when compared with what is done by English trawlers, French fishing craft (not very careful or scrupulous), screw steamers, and sailing ships of every class and nationality, that go tearing through the fishing fleet each night.

Scotch fishermen are, as a body, most careful of their own and other men's property at sea. I am satisfied the more that is known of them at Lowestoft and Yarmouth, the better they will be liked, and it is a strong proof that the boatowners of those places do not consider Scotch boats unsuitable for their work, that they have recently brought a number of them from the Anstruther district. Those boats are now at Lowestoft and Yarmouth, and I submit that their rudders may be taken as a fair test of what those of Scotch boats generally are.

I am, &c.
(signed) SAML. MCDONALD, Commander.

The Hon. B. F. Primrose,
&c., &c., &c.,
Edinburgh.

Mr. John Bates, fish merchant of 44 years standing, of Gorlestone, fully confirms the statement made by the Lowestoft merchants respecting these projecting rudders of the Scotch fishing boats. He states that by far the greater part of those who bring their catch

into Yarmouth Harbour have these rudders, which can be easily proved during the fishery which will soon commence.

At my second visit to Yarmouth in September I went more fully into the question above mentioned. There were several Scotch fishing boats in Yarmouth Harbour, and I had an interview with the captains of two of them; namely, Mr. Anderson, of the "Enterprise," M. E., No. 360, and Mr. James West, of the "Superb," M. E., No. 359. These gentlemen informed me that they had taken steps in order to obviate the evil of running foul of other people's nets. The construction of the rudders of their boats, which were new, and lately built at Montrose, was so adapted that for the future the rudders could not get foul of the herring nets. They also informed me that the new herring boats which are now and lately have been built in various parts of Scotland, had their rudders fitted on the new plan. A change in the rudders of the Scotch boats is now gradually being effected everywhere. It is difficult, without a diagram, to show the difference in working of the old and the new rudders.

The remedy for preventing the rudders getting foul of the nets may be thus formularised:—The iron keel of the boat should extend some few inches from the stern of the boat, and the rudder should be made to rest upon such extended portion, so as to make an even keel from the stem of the boat to the extreme end of the rudder. I trust that the Scotch Herring Commissioners will be good enough to attend to this matter.

Spring Herrings.

My attention was called during the inquiry at Yarmouth to the question whether or not it would be desirable to place any restrictions on what is called the "Spring Herring Fishery" opposite the coast of Norfolk. It appears that there are no herrings caught in January. Towards the end of February the fishermen begin to catch spring herrings, and the fishery lasts during March, April, and May. During June and July, the midsummer herring fishery is carried on, more or less. In August, little is done in herrings; the "Harvest of the sea" begins in September and lasts until about Christmas. This is called "The Autumn or home fishing."

The spring herrings are described as being nothing but skin and bone; there is no fat whatever about them. They are not good, even hardly fit for human food. Mr. Norman, in evidence, stated that the Yarmouth spring herrings are in very bad condition, and that they are not even good for manure. Mr. Woodger, fish merchant, and Mr. Howes, fisherman, and Mr. Watson, manager of the Sailors' Home, all considered that some regulation should be placed upon the spring herring fishery, as they considered that the failure in late years of the midsummer herrings was due to the killing of the spring herrings. The midsummer herring is a larger, handsomer, and fatter fish than the spring herring; and whereas the spring herrings are from six to seven inches in length, the midsummer herring is generally eight to nine inches in length.

As the warm weather comes on, so the quality of the midsummer herring improves. I have made an anatomical examination of a spring herring and of a midsummer herring. There was little or no fat or roe in the spring herring, whereas the fat in the midsummer herring was so abundant that the water in which it was dissected became so covered with oil globules as to remind one of cold beef tea. The gentleman last named advised that there should be a close time for spring herrings from the 1st of January to the 1st of June, in order to increase the take of midsummer herrings. Mr. Watson considered that a net of large "shale" (Norfolk for mesh) should be enforced, and that the minimum size of the shale should be "30 to 32 meshes (when dressed) to the yard."

Mr. Decaux informs me that when fishing with a small shale net all big herrings get hanged by the nose but yet not caught as they fall out of the net, while the smaller and inferior herrings are captured. If an enlarged mesh were instituted for the spring herring fishery, the larger herrings would be caught while the smaller and thinner fish would escape and be allowed to grow. The shale in his opinion should be when new forty to forty-one per yard; this shale would when prepared shrink to thirty-six per yard. No shale smaller than this should he thinks be used for the spring herring fishery.

It is considered that the mackerel fishery was also injured by the spring herring fishery, and that the latter had the effect of driving the mackerel from the coast. There is no objection to fishing for mackerel with a large shale, because the spring herrings would escape through this shale. When a shale small enough to catch spring herrings is employed, the mackerel like the large herrings get partially caught in the net, from which they fall out, are drowned, and thus lost altogether.

I am sorry that the Yarmouth fishermen, with two or three exceptions, did not think fit to put in an appearance at the inquiry relative to the alteration of the mesh, or the enactment of a close time for spring herrings. I was, however, informed that the spring herrings were caught by the Lowestoft fishermen much more than by the Yarmouth fishermen.

Lowestoft Herring Fisheries.

Lowestoft* is situated about but seven miles from Yarmouth Harbour, by the sea coast; and although it is situated in the county of Suffolk, yet as regards its herring fisheries, it became absolutely necessary to consider Lowestoft as equally interested in the above points with Yarmouth. I therefore held a meeting, which was numerously attended by gentlemen and fishermen directly interested in the spring herring fishery at Lowestoft.

Captain

* Lowestoft is pleasantly situated on the most eastern part of Great Britain, and has a large lake forming the inner harbour. It is about 114 miles N.E. of London and 25 miles E.S.E. of Norwich. Lowestoft is evidently a thriving town, its population having increased from 2,332 inhabitants in 1801 to about 16,000 at the present time, mainly though the railway and its extensive fisheries, as the statistics given in this report amply prove.

Captain Small stated that the spring herrings were a different class to the midsummer herrings. In some instances the spring herring fishery is quite as profitable as the autumnal fishery, also called the "Home season."

Mr. Capps stated that the spring herring fishery begins at the end of February, and continues to the end of May. These spring herrings were of great value to the Lowestoft people; from 20,000*l.* to 30,000*l.* are put into circulation by the spring herring fishery in Lowestoft, and upwards of 1,000 men and boys are employed on the water during the spring herring fishery. At that time boat-owners had no other employment for their men; 80 to 90 boats go out from Lowestoft, and several from Gorlestone, to catch these spring herrings.

A large proportion of these spring herrings are sold for bait by the Lowestoft men to the Dutch and French fishermen, who come over to Lowestoft on purpose to buy them. These spring herrings are used by the Dutch and Frenchmen to bait the long lines, to catch halibuts, turbots, &c. It would be considered a great hardship if the Lowestoft men were not allowed to catch the spring herrings, and to sell them as food when the demand occurs; but above all, to sell them to the foreign vessels for bait. The argument of the Lowestoft fishermen was concluded by the statement that if the Lowestoft, Yarmouth, and Gorlestone men were prevented from catching spring herrings, and selling them to the Dutchmen and Frenchmen, the Dutch and Frenchmen would come and catch the spring herrings for themselves, as, somehow or other, they must have this class of fish to enable them to carry out their deep-sea fishing with success.

As regards the capture of the spring herrings affecting the midsummer and autumnal fishings, I have obtained the following information from Mr. C. Tilmouth, Collector of Port Dues, Lowestoft:—

Herrings Caught at Lowestoft.

Year.	Spring Herrings.	Midsummer Herrings.	Autumnal Herrings.
	Lasts.	*Lasts.*	*Lasts.*
1860 - - -	1,521	304	2,645
1861 - - -	793	261	3,613
1862 - - -	538	75	5,711
1863 - - -	1,044	17	5,226
1864 - - -	1,634	38	4,675
1873 - - -	1,887	54	10,973
1874 - - -	2,546	112	9,173
1875 - - -	1,064	106	—

Hence

Hence I think it may be fairly concluded that the destruction of spring herrings has not at all affected the autumnal fishings, as, in spite of the large number of herrings caught early in the year, the autumnal fishings have not, according to the above figures, fallen off, but on the contrary have very much increased.

Midsummer Herrings.

Respecting the midsummer herrings, this voyage is very fluctuating, and the above returns show that the catch at Lowestoft varied from 304 lasts in 1860 to 17 lasts in 1863, and then increased to 112 lasts in 1874, although the *spring* herring voyage in that year, viz, 1874, was by far the largest on record.

In 1874 the spring herrings were captured in extraordinary numbers; it was anticipated the midsummer herrings would, in consequence, fall off. On the contrary, they were double the catch of the preceding year, and this was followed by a very good autumnal fishing.

This year, 1875, the midsummer catch was 106 lasts, or six lasts less than the midsummer catch of 1874. The spring catch of 1875 was 1,500 lasts less than 1874, consequently, if the Yarmouth men are right in their idea that by sparing the spring herrings the midsummer herrings will be increased, the midsummer catch of 1875, instead of being less than last year (1874), should have been one of the best for many years past.

The above facts show that the catch of spring herrings has not much effect upon the midsummer voyage.

The commercial importance of the Lowestoft fisheries may be perceived from the following figures, which were kindly given me by Messrs. Robert Wright and Lane, fish merchants, Lowestoft, showing the number of boats and men employed at Lowestoft:—

Trawling smacks	78
Luggers and dandies	260
Small boats	120

Men employed.

Trawlers, average 8 men and boys; Total, 624.
Luggers and dandies, average 10 men and boys; Total, 2,600.
Small boats, average 2 men; Total, 240.

This gives a total of—

Vessels of all classes	458
Men and boys	3,464

This is the total of registered vessels and their crews, but it does not include the shore men, who are employed in the markets as packers, curers, &c.

Nor does it include the West Country or Scotch boats which use this port during the herring season. These may be safely reckoned on as—

Vessels	120
Men and boys	1,000

So that it will be seen that there are employed in the

Lowestoft Fisheries—

Vessels - - - - - - - -	578
Men and boys - - - - - -	4,464

In coming to a conclusion on the subject of spring herrings, I have to observe—

First. That it has not yet been ascertained for certain whether the spring herring is a "kelt" herring, *i.e.*, one that has just spawned, or a grilse herring, *i.e.*, a herring that is not yet come to its full growth.

Second. That it is "not proven" by certain and positive evidence that spring herrings—whether they be kelts or grilse—do really and actually fatten up into midsummer herrings.

Third. That a large and profitable sale of these herrings *as bait* is carried on by those who catch the spring herrings; thus, they indirectly tend to the increase of the general food of the public, inasmuch as large and valuable deep-sea fish, such as halibut, turbot, &c., could not be caught without them—other kinds of bait at this time of year not being easily accessible.

Fourth. That although the spring herrings are captured every year in large numbers, yet the autumnal or home fishery has by no means fallen off, but has, on the contrary, *increased*.

For these reasons I advise that No Legislation, whether as to close time or mesh of net, should be enacted so as to affect the Herring fisheries of the coast of Norfolk or Suffolk. Information as to the natural history of the herring will be found in the Appendix, p. 77.

The Lowestoft Mackerel Fishery.

The mackerel voyage on the east coast, even its best days, was rarely remunerative either to owners or men; more frequently the amount realised barely paid charges for provisions, leaving nothing for wages, or wear and tear of boats and nets. The owners never expected much, and it was more to keep their men in employment than in anticipation of profit that this voyage was carried on for many years. In 1854 there were 20 mackerel boats out of Lowestoft; in 1862 these had decreased to three, and their gross earnings averaged only 9*l.* per boat.

In former years mackerel realised a large price; now the merchants have to compete with very fine fish caught off the Irish coast, near Kinsale, and also with the immense numbers imported from Norway. These mackerel are packed in ice, and find a ready market amongst the manufacturing towns as well as in London. In 1874 Yarmouth and Gorlestone had a few boats engaged in this fishery for a short time in the autumn; *i. e.*, nearly four months later than the mackerel voyage of former years commenced. From all I can ascertain, mackerel nets are of but little value at the present time, and there is little or no prospect of this fishery becoming an important one again, either at Yarmouth or Lowestoft.

In

In 1862 the Lowestoft mackerel fishery seems almost to have died out, as the following returns will show (*vide* Nall's Guide):—

Year.	Number of Boats Engaged.	Total Earnings.
		£.
1854 - - - -	20	3,460
1855 - - - -	6	930
1858 - - - -	10	710
*1862 - - - -	3	27

But it revived again in 1864, and was carried on with more or less success since then.

Mr. C. Tilmouth, Port Dues Office, has kindly given me the following statistics of Lowestoft mackerel fishery since 1863 :—

Year.	Hundreds caught; 120 in each Hundred.	Total Amount Realised.	
		£. s. d.	
1864 - - -	525	656 5 –	
1865 - - -	2,079	2,598 15 –	
1866 - - -	2,367	2,958 15 –	
1867 - - -	6,261	7,826 5 –	
1868 - - -	4,124	5,155 – –	
1869 - - -	7,870	9,837 10 –	
1870 - - -	6,612	8,265 – –	Average price of fish, 26 *s.* per 100.
1871 - - -	2,515	3,141 15 –	
1872 - - -	3,334	4,167 10 –	
1873 - - -	4,586	5,732 10 –	
1874 - - -	3,147	3,933 15 –	
1875 - - -	3,926	4,907 10 –	

The average number of boats engaged in this fishery may be taken at about 50.

* This seems to have been the lowest year on record, as the boats' catch only averaged 9 *l.* Since that time more fish have been taken (*Vide* Mr. Tilmouth's Return), but the catch, when divided amongst 50 boats, is still very unremunerative. Provisions (meat especially) being very dear, the catch ought to be 300 *l.* each vessel, and even then it would not pay owing to the present high price of meat and the difficulty of obtaining crews.

The Trawl Fishery.

The trawl vessels catch their fish on the vast submarine plateau extending from Flamborough Head to south of Orfordness on the English coast, and from the Long Fisher Bank, north of Heligoland, to Ter Schelling, on the Dutch coast.

When privately inquiring into the cod fisheries at Great Grimsby in 1873, I was informed that the Grimsby fishermen consider their trawling ground may be said to extend from the North Foreland to Duncansby Head in the Pentland Firth, and from the coasts of England to those of Norway, a space of about 500 miles long, and from 300 to 400 miles wide. From the above data, some idea may be formed of the vast area over which trawling operations may extend.

According to the Yarmouth calculation, given by Mr. John Bates, the trawling ground consists of about 50,000 (fifty thousand) square miles.

According to Grimsby calculation, the trawling ground consists of about 130,000 (one hundred and thirty thousand) square miles.

It must be recollected, however, that only a comparatively small portion of this vast area is available for fishing purposes; what those portions are may be found recorded on an Admiralty chart now in my Museum of Economic Fish Culture at South Kensington.

Forty years ago there were only *two* vessels belonging to Yarmouth engaged in trawling. About 30 years since, two or three of the merchants began to fit out their luggers, so as to trawl for fish after the herring voyage had terminated. This venture proved so successful that many others followed their example, and with such continued good fortune that smacks began to be built in Yarmouth specially for the trawling, as it was found by experience that this mode of fishing required craft of larger size, and more beam than the old herring luggers. Barking at that time had by far the largest number of trawlers in England; there are now only two smacks engaged in this trade sailing out of that port. It seems extraordinary that with such a fishery at *their very doors*, it was not commenced in Yarmouth and Grimsby much sooner. The expenses of the Barking vessels far exceed those of the Yarmouth boats, as they have to go home to refit, a distance of 150 miles more than the Yarmouth men, involving great loss of time and labour. In 1866 Mr Samuel Hewett stated before the Sea Fishery Commissioners that in 1848 there were only five trawlers out of Yarmouth, which had increased in eighteen years to 150 vessels. The great impetus was given to trawling by the removal of Mr. Hewett's fleet of 70 or 80 sail from Barking to Gorlestone, and now this fishery has so enormously increased that there are probably 400 sail of vessels engaged in trawling belonging to Yarmouth and Gorlestone alone, some of the merchants having more than 20 sail, worth at least 1,000*l.* each. In addition to these trawlers there are many very fast-sailing cutters, for conveying fish from the different fleets *direct to Billingsgate*, and with a fair wind their speed is almost unrivalled. Some few of the trawlers frequently come into the Roads with

with their own catch of fish, but by far the greater number are divided into fleets, each fleet under the authority of a very experienced man, who is master of one of the boats and also called "Admiral of the Fleet," and each fleet has its own attendant carrying cutters. The "Admiral" receives a small extra pay from each vessel, and all have rigidly to obey his signals for sailing, trawling, and conveying fish to the carrying cutters. Some of the craft haul up their gear at 12 o'clock on Saturday night, and begin fishing at 12 on Sunday night. These generally have Divine service if the weather permits.

Nearly all the Yarmouth and Gorlestone boats come in about three days before Christmas, and there is not such a sight in all England as these fine vessels, lying off the fish wharf* in one unbroken line a long way down the harbour. They return to sea in about a week, and during that time the crews are busily engaged in refitting the vessels.

Many of the merchants have icehouses, and there are several of very large size near the two railway stations, the fish wharf, &c. Ice is, indeed, *a necessary* for the Yarmouth trawlers; without it they could only make very *short trips*, and the fish even then would often be spoiled long before it reached the harbour, much more London and the inland towns, if it was not for the large quantity each vessel carries out to sea. Enormous quantities of ice are brought to Yarmouth in wherries holding 20 or 30 tons, from the numerous Broads and rivers of Norfolk, and long strings of carts may also be seen at the icehouses, unloading their cargoes, collected from the large marsh dykes, thus giving employment to many hardworking men at the dullest time of the year. In the summer season vessels of considerable tonnage, painted white, may be seen discharging their cargo of this precious material at the large icehouses. These craft mostly belong to Norway, the ice being stowed in large square blocks. The fishermen prefer it to the "Broad" ice, but it is much more expensive, as may be imagined. The item of *ice* to the *trawler* is something like *salt* to the *herring fisher*, and a *mild* season makes a large hole in the year's profits. Then there is *no alternative* but Norway ice.†

I took as much evidence as I possibly could as to whether the fishing by trawlers was or was not falling off, and I am happy to be able to report that, apparently, in spite of the number of vessels, the fishing, with the exception of the soles, is not diminishing. Mr. T. Wiseman rather differs from this view. *See* p. 18.

A most interesting fact was stated by Mr. Fenner, fish merchant, of Yarmouth, who has had great experience as a trawler. The

* The Yarmouth fish wharf is one of the finest in Great Britain, and cost over 20,000 *l.*

† A new process for the preservation of fish as food has lately been submitted to me. It is Gorges & Co.'s Patent Fresh Fish Preserving Fluid: Offices, 17, Old Change, Cannon-street, London. I have ascertained by experiment that it answers admirably on a small scale; I have great hopes it will be found to act equally well on a large scale, especially in the transport of fresh herrings without ice or salt from distant parts of the kingdom.

The same fact was also given to me voluntarily by a youth who was taking charge of a smack at the quay.

It appears from the evidence of Mr. Fenner that it frequently occurs that, when a trawler with her net down follows close in the wake of another, the trawler in the rear catches more fish in her net than the trawler which immediately precedes her. On one occasion Mr. Fenner was trawling, and following another trawler so close behind that the sound of a man's shout could be heard from either boat; in this case the catch of the second trawler was far larger than that of the first. This may be explained in two ways; first, many of the fish, such as soles, plaice, &c., may have buried themselves in the sand, so that the ground rope passes over without disturbing them. After the danger is over they get frightened, and begin to move about, and the second net, which they, perhaps, cannot see, on account of the sand being stirred up, catches them. The other explanation is that the first trawl rope disturbs the worms and food of the fish at the bottom of the sea, and, just as in gudgeon fishing it is necessary to rake the bottom before the gudgeon will come, so, the sea worms and other food being turned up by the first trawling net, the fish immediately rush to the spot to pick up the food which is flying about, and get caught by the second trawl net. Mr. Fenner is of opinion that *all trawl nets* should be made of the same mesh as those used by large smacks. He also strongly recommends the return into the sea of all very small soles that are found in the nets alive.

Mr. John Bates, fish merchant, of Gorlestone, formerly in the employ of one of the largest fish merchants at Barking, one of the Admirals of the trawling fleet, and altogether 44 years in the trade, informs me that, in 1845, the Silver Pits, a noted fishing ground in the North Sea, was discovered, and extraordinary hauls of soles were made; it is about 100 miles long by 20 wide, and from 32 to 44 fathoms in depth. The Dogger Bank is another favourite fishing ground, in about 52° to 54° North latitude, longitude 2° to 4° East. Mr. Bates considers there is a decrease in the quantity of soles, turbots, brills, and plaice in the last few years, owing to the destruction of small fry on the spawning grounds near the Dutch coast.

Important evidence was given me relative to the spawning ground of the North Sea fish, and the destruction of fry.

Mr. Isaac Wiseman, of Gorlestone, now a smack owner, and formerly 21 years engaged in trawling, is of opinion that there is a decrease in the quantity taken of turbots, brills, plaice, and more especially soles, in the last few years. He considers the great cause of this falling off to be the immense destruction of small fish in the great *spawning grounds* and *fish nursery* of the North Sea, which are about 20 miles in width, and extend from the German coast up to the Texel.

In the present year he saw hundreds of vessels trawling there during the months of May, June, and July, and, at a moderate calculation, at least 100 tons of very small fish were destroyed every night, being literally choaked in the trawl nets with sand. Each hundred tons he considers would, if let alone, become 2,000 tons of good fish in time.

The

The greatest mischief is done there by the Dutch vessels; they fish much nearer the shore than English smacks, as their draught of water is not so much; whereas the English smacks rarely fish in less than seven fathoms of water.

The Germans protect their coast, and will not allow any trawling vessels to fish inside nine fathoms of water; they have a gunboat constantly watching the smacks to see this is strictly carried out. The German spawning grounds reach nearly to Heligoland.

Twenty years ago immense numbers of soles, turbots, and other flat fish were taken on the East Coast of Holland and the Silver Pits; now the quantity is less and less every year. He thinks there should be no trawl fishing within the seven fathom mark on the Dutch coast; outside that the fish are of good size; they hatch near the shore, and after a time go into deeper water, especially to the Silver Pits; there they grow much larger. In deep water very few small soles are taken, as if there they get through the meshes of the trawl net. Mr. Wiseman has seen this many times; whereas in shallow water they are smothered with the sand in the large trawl nets. Outside the 20 mile mark there is mud and oysters, and fish of large size. He says that "nursery" is a very good word, for they hatch in warm shallow water, and as they grow, go into deeper water: surely, therefore, this nursery should be well protected, for it is of the very greatest importance to the *whole of the trawling grounds in the North Sea.* Round Heligoland is another first-rate spawning ground, *many miles wide*, and our Government might protect this with very little trouble or expense. I propose to bring these facts before the German Fishery Society, Berlin, and also of the Fishery Society of Dortrecht. I have the honour to be corresponding member of both these societies. They will doubtless take the matter into consideration.

Inshore Trawling.

Although there is now a large fleet of trawlers out of Yarmouth, good sized soles are very scarce and much dearer than 40 years ago. I ascertained that enormous quantities of very small soles are brought in, more especially by second-class trawlers, some fifty in number, who catch them near the sands. I find from specimens sent me that the mesh of nets used by the large trawling vessels is 1¼ inches from knot to knot in the cod end or poke, and 2 to 3½ inches in the remainder of the net. The second and third class trawlers have nets with a much smaller mesh than this; and, of course, they take soles that would pass through the nets of the larger vessels.

Enormous numbers are also destroyed by the fine mesh of shrimp nets, which is only about one-third of an inch from knot to knot. If this great destruction of fish were properly recognised by the fishermen, they would all agree to return the small soles into the sea, after each haul of the net, instead of allowing them to die amongst the weeds in the bottom of the boat, or selling them for next to nothing when brought on shore. These small soles are mostly found at the bottom of the packages, covered up with large fish; and in one trunk of soles alone, brought on shore and opened in a fishmonger's

shop at Yarmouth, no less than 62 pairs were taken out which only weighed 9½ lbs. altogether, or about 2½ ozs. for each pair. These fish soon would have grown into as many pounds in weight. On the 25th September I examined at Yarmouth a package of soles; 22 of them weighed 3 lbs., or a little over 2 ozs. each; they measured 6, 7, and 8 inches. These small soles go by the name of "Tongues;" the smallest are "Cat's Tongues." "Slips" are 9½ to 10 inches in length. A fair sized sole would be about 12 inches. I have casts of six little soles, none of which measured more than 3 inches.

Mr. John Bates states that, with proper management, nearly all small soles taken by inshore trawlers could be safely returned to the sea again. Haddocks, whiting, cod, &c., die very soon. Soles live a long time out of the sea, and they spawn in shallow water, consequently there is the more need to protect them, as the small trawlers fish closer in shore than the large boats.

Mr. James Chapman, fish merchant, of Yarmouth, fully confirms this, and states that formerly it was the custom to return the small soles into the sea; large soles were then plentiful; now they are becoming scarcer and dearer every year.

A Manchester fish merchant informed me that soles, 14 years ago, cost 2*d.* to 2½*d.* per lb.; now they are 8*d.*, 10*d.* to 1*s.* 2*d.* per lb.; large soles are difficult to be got at all. No small soles should be allowed to be sold in the market at all.

Fish merchants, fishmongers, fishermen, and the public would be immensely benefited if this wholesale destruction of one of the best sea fish were prevented by law.

All agree that no alteration is required respecting the nets of large trawling vessels.

The following suggestions have been submitted to me:—

That *all trawl nets* should be of the same mesh as those used by the large smacks. That live soles under 8 inches in length should be immediately returned into the sea after each haul of the trawl nets and also of the nets used by the shrimp boats.

In the Sea Fisheries Report, 1866, we read: "However, it should further be stated, that there is an Act (1 Geo. 1, c. 18) which appears to be unrepealed, except so far as it relates to the supply of fish to Billingsgate Market, by 9 & 10 Vict. c. cccxlvi.* Under this Act it is illegal to use any trawl net, drag net, or set net whatsoever, for the catching of any kind of fish (except herrings, pilchards, sprats, and lavidnian), which has any mesh or moke of less size than 3½ inches from knot to knot. Such nets shall, by warrant of a justice, be publicly burnt.

"By the 7th section of this Act it is forbidden to bring to shore, in England, sell, or expose to sale or exchange for any other goods, any unsizable fish; that is to say, brill and turbot of less than 16 inches; brill or pearl, 14 inches; codling, 12 inches; whiting, 6 inches; bass or mullet, 12 inches; sole, 8 inches; plaice or dab, 8 inches; flounder, 7 inches; subject to fine or imprisonment, and forfeiture to the poor of the parish of the unsizeable fish."

I find

* Now repealed by the Sea Fisheries Act, 1868.

I find in the Proceedings of the Paris Acclimatisation Society a table giving the length of sizeable sea fish in France; from this it appears that, by the decree of the 4th July 1858, the following were the legal sizes for the sale of fish:—Turbot, 8 inches; mullet, 6¼ inches; sole, 6½ inches.

Then by the decree of the 10th May 1862, the sizes appear to have been altered as follows:—Turbot, 4 inches; mullet, 4 inches; sole, 4 inches.

The progressive growth of young soles is not yet known. I shall make it my duty to request the Directors of the Brighton and the Southport Aquaria to institute experiments on this subject.

To advise legislation on this inshore trawling is a most difficult matter. On the whole, I think it would certainly tend to the increase of the Yarmouth sole fisheries if it were made illegal to sell, or expose for sale, any sole under seven inches in length, and that fishermen should be compelled to turn back all soles under the above size into the water with the least possible injury.

It would also tend very much to the general increase of the number and size of soles in the public markets, if a general enactment were passed, that no sole should be sold, or exposed for sale, under seven inches in length in any part of the kingdom. As regards the destruction of the small shrimps by the shrimp nets at Yarmouth, I am strongly of opinion that the shrimps should be passed, when alive, out at sea, through a sieve having a mesh which shall just allow three new penny pieces to pass between the cross wires, and that the smaller ones should be allowed to fall back into the water. This plan has been adopted by the fishermen at Leigh, in the estuary of the Thames with great success.

Now that this important matter is fairly put before the inshore trawlers of Yarmouth district, I feel convinced that they will see that it is to their interest to return the small fry alive to the water.

The destruction of sea fish fry throughout the whole country would be greatly lessened if the public would be good enough absolutely to refuse to purchase fry—especially small "Tongue" soles—for any purpose whatever.

Oysters on the Coast of Norfolk.

There is no regular oyster fishery now at Yarmouth. It was given in evidence that some years since, when the mushroom anchor and chain of a lightship stationed off this coast were removed, a large number of oysters were found attached in clusters to the anchor and also to the chain. Dredges were then used by many boats coming from Yarmouth, and a considerable bed of oysters was found at and about the lightship. They were, however, soon dredged out; the men left off working for them as soon as they found they caught so few oysters that it would not pay to go on working them. To account for the presence of the bed of oysters it is here necessary to explain how, in my idea, they came there. When the mother oyster spawns, she opens her shells and blows out the "spat" in a dense cloud, not at all unlike the steam from a railway engine on a still clear frosty morning. If the water is quiet,

the tide calm and the temperature warm, these young spats swim up and down and around their mother; when the sun is very hot they ascend to the surface, and there play about like gnats on a still evening. It frequently happens that the tide drifts immense numbers of these living spats away from among the shells of the parent oysters; these spats swim and are carried by the tide, and at last they sink to the bottom of the sea. If the bottom is clean and favourable for their taking hold of some suitable culch, they remain and establish a new oyster bed; if not, they all perish.*

This migration of the young oysters is somewhat analogous to the swarming of bees. The young bees leave the parent hive for the reason that if they stayed in the hive there would not be space for the two families, and the general stock would suffer. In the same way the oysters by a provision of nature may be said to "swarm" in order that there shall not be too many on one spot.

I consider that the bed of oysters found at and about the light-ship was formed by a swarm of oysters settling down and remaining there till they were discovered by the lifting of the chain. It may, and very likely will, happen that another swarm of oysters may alight on this very spot. It should be, therefore, examined every year. Of course if the ground could be regularly cleaned for the reception of the spat, should it perchance come, so much the better; but, I fear, as this is a public fishery, no one would go to the trouble or expense of cleaning the ground. Again, should a summer occur favourable for the adhesion of the spat, the few mother oysters left on the spot might possibly once more stock the ground without the aid of a swarm of spat chancing to alight there.

I may here take the opportunity of observing that it would be an excellent plan if all revenue cutters around the coasts of Great Britain were instructed to put down oyster dredges as often as possible. If this were done I feel convinced that many valuable oyster beds would be discovered, the existence of which is at present quite unknown.

In the autumn of last year a large bed of oysters was discovered between the Ridge and the Brixey Sands, at the mouth of the Crouch, Essex. The oysters were about one year old.

The most favourable culch for catching young oysters consists of empty oyster shells. The empty oyster shells from London and other oyster shops should, therefore, be thrown back on to the oyster beds in order to catch the spat should a fall occur in consequence of favourable conditions of wind and weather.

I would now beg to call attention to a great waste of oysters which I observed is now going on in Yarmouth. On two occasions I examined several sacks of oysters that were being sorted in Young & Co.'s warehouse for sale in the streets of that town. Mr. Gibbons, of Young & Co., tells me that the average price of

* In August 1875, some divers belonging to the Trinity Corporation removed a large iron beam from the wreck of an iron steamer lying in 17 fathoms water, between the Wellington Pier and Scroby Sand. Some remarkably fine oysters were found upon this iron, and no doubt many more might be obtained near this spot.

of these oysters is four shillings per bushel. They begin to come into market in August and go on all the winter. Some vessels bring in from 40 to 50 bushels. In summer time they will not carry, and are thrown again into the water. These oysters, though large, thick-shelled, and rough, contained a fair quantity of meat in proportion to shell by weight. On a great majority of them I observed from one to as many as five young oysters adhering to one parent shell; these little oysters were about the size of a two-shilling piece. They are seldom, however, broken away from the parent shell, so that it frequently happens in practice that from one to five young oysters adhering to the parent shell (which alone is emptied for the sake of its meat) are thrown away to perish among the rubbish. This state of things is a great waste of valuable property and food. All oyster shells, therefore, upon which are found adhering any young oysters whatever, should be carefully set aside and put in a favourable place to fatten. In this way a great addition of oysters as food for the markets would take place.

I understand that there is an enormous oyster bed in the North Sea, east of the Silver Pits, in about 27 fathoms. It is nearly 80 miles long and 25 miles wide. The trawlers avoid this "rough ground," as they call it, as much as possible; but when they do by accident get on to it, the oysters are so numerous that they fill up the trawl net and nearly bring up the vessel. A great many oysters are thrown overboard for want of means of transit when the catch of fish is large. I feel certain it would pay to send out a vessel to buy these oysters out at sea from the trawlers; they should be brought and laid in some favourable locality, such as may be found at Whitstable, and in the Crouch and Roach, and other well-known oyster rivers of Essex. The old oysters thus obtained would fatten and breed and become valuable for market, while the broods and half-ware (young oysters) would also grow and fatten.

In order to save the lives of the brood and half-ware now wasted at Yarmouth Fish Market, I am strongly of opinion that Breydon Water, close to Yarmouth, should be tested to see if its waters are favourable for the fattening of the old oyster and the growth and fattening of the young ones. Breydon Harbour is a large tidal estuary, in some parts of it the right mixture of fresh and salt water would be surely found to exist, I therefore strongly advise the authorities at Yarmouth to look to this matter. After experiments have been tried to see whether Breydon Water will fatten the oyster or not (my own opinion is that it will), a grant may possibly be made by the Board of Trade, and a profitable fishery might thus be ultimately established.

As regards the oyster and mussel fisheries of Lynn and its neighbourhood, *see* page 43.

Sea Trout on the Norfolk Coast.

A novel and astonishing fact has come to my knowledge during my inquiry at Yarmouth. It consists in the large number of trout which are caught along the coast near this port. For some weeks

previous to my inquiry I had been informed by Mr. Norman that sea trout had, on several occasions, been taken in this neighbourhood. Mr. Samuel Amis, one of the principal fishmongers of Yarmouth, gave evidence before me to the effect that for the last 20 years he had bought trout from the fishermen on Yarmouth beach, in more or less considerable numbers every year, and that the supply was gradually increasing. The fishermen begin to take these trout in the middle of April, and go on catching them until the latter part of July or beginning of August. The capture, of course, depends upon the state of the weather; they are never caught in bad weather, and only at night time. The present season of 1875 has been very productive, as one fishmonger alone purchased more than a ton weight of trout, and altogether a large number must have been taken.

The fishermen in the neighbourhood of Yarmouth catch these trout from 30 to 150 yards only from the beach; they disappear about the end of August or middle of September. The average price per pound is 1*s.* 3*d.* to 1*s.* 6*d.*

On the 21st of June I examined several trout in Mr. Amis's shop. Some were on the slab, and some packed away in ice. Mr. Amis gave me from his books the following list of the boats, from the owners of which he had purchased these fish that morning:—

	lbs.
Boat 1	51½
„ 2	22
„ 3	37½
„ 4	30
	141

This was considered a good haul for one night's fishing. The average night's catch of trout, taken from May to the end of July, is about half of the above quantity, or about 70 lbs. The largest night's catch this year by all the boats was over 1,000 lbs., but frequently not a single fish is brought in.

I have made careful examinations of these fish; they may be divided into four classes, viz.:—

A.	fish weighing	¼ lb.
B.	„ „	1½ lbs.
C.	„ „	3½ lbs.
D.	„ „	6 lbs.

The average size of these fish was over 2 lbs. I was, however, fortunate in obtaining a very large trout from Messrs. Rand & Brown which had been landed on the morning of the 18th June. This was an exceedingly handsome fish, and I have made several casts of it; it weighed over 10 lbs., and its length was 2 feet 3 inches.

I do not know that I ever had a more difficult problem to solve than to account for the origin of these fish. Most of them are sea trout (*Salmo Trutta*); some are certainly bull trout (*Salmo Eriox*). I ascertained

I ascertained in the course of my inquiry that they were not bred in any Norfolk rivers, there being no ground suitable for the spawning of migratory salmonidæ. They must, therefore, have been bred in and migrated from some of the rivers flowing into the German Ocean north of Yarmouth, for there is no important salmon river south until we come to the Hants, Devon, and Cornish rivers. The first northern salmon rivers we come to are the group of Yorkshire rivers running into the Humber. Passing further north, we arrive at the Tees, the Wear, the Tyne, the Coquet, the Tweed, and the Forth, and other rivers emptying themselves into the Firth of Forth. The lighthouse keeper at Gorleston Pier, close to Yarmouth, informs me that from his experience as a fisherman he was aware that the trout came from the north; that they were not found on rocky places, but more especially where there was sand; a very good place to catch them was the sandy bay to the southward of Gorleston Pier, under the cliff, and south from thence to Benacre Sluice. The existence of these trout, in more or less abundance, along the whole coast of Norfolk has been proved from evidence I received from Yarmouth, Lowestoft, Cromer, Wells, and Lynn.

I have come to the conclusion, from the evidence obtained, that the sea trout and bull trout which are caught in such considerable numbers have migrated southwards from the Tees, Wear, Tyne, Coquet, or Tweed; in all of which, especially the Tees and Coquet, they are very abundant. The distance from the Tweed to Yarmouth, as a fish swims, would be about 200 miles.*

I was also informed that about ten years ago a salmon trout was caught off Yarmouth, carrying a metal label with a Berwick mark. I have made every inquiry for this label, but have not yet succeeded in getting it. I venture to observe that I was not informed of this fact until I had arrived at the above decision on the origin of the trout on the coast of Norfolk.

Trout, similar to the Norfolk coast trout, are often caught at and about the estuary of the Medway at the mouth of the Thames. I have hitherto been unable to account for the origin of these fish, but I now think it very likely that these Medway trout form part of the shoal of the annual migration, which spreads itself from the northern rivers over the whole coast of Norfolk, and as far south as the estuary of the Thames.†

It will naturally be asked why these trout should migrate southwards?

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* Mr. H. R. Rump, of Wells, writes to me as follows:—"Salmon trout fishing begins here early in April, and is carried on by seines or draft nets late at night. Horse seines and boat seines are used to capture the fish. When first arrived, the salmon trout are out of condition, spent and flabby, are pale fleshed, and are called by the fishermen "shotten" fish. After being here a few weeks, they improve, and then disappear in June and July."

† For several years past Mr. Ponder, of Hampton, and myself have, at our own cost, hatched out and turned down into the Thames many thousands of salmon and trout fry. It may be possible that the migratory salmonidæ caught in the estuary of the Thames are from our breeding troughs, but I am now more inclined to believe they are travellers from other rivers. Nevertheless we do not intend to cease from our attempts to salmonise the Thames.

wards? The answer is, certainly in quest of food, which consists of the fry of small sea fish. In making a post-mortem examination of the large trout I found he had been eating sand-eels.

I beg to remind those who take these trout that they are "salmon" under the interpretation clause of the Salmon Act, 1861, and that the provisions of the Salmon Acts as to mesh of nets, *i.e.*, two inches from knot to knot, and the annual and weekly close time apply to these Norfolk trout.

Smelts.

A few years since, Yarmouth was noted for smelts of large size; considerable numbers were taken in the shallow parts of Breydon water, also in the Yare and Waveney, and at Gorlestone, south of the harbour's mouth. Smelts are still captured, but in less numbers every season; they are very small when compared with former years. Some legislation is very requisite respecting the size of these fish; eventually restrictions on their capture would be a benefit to those fishermen who now make only a precarious living, as the fish realise a comparatively trifling sum to what they would bring if allowed to grow a few months longer. Mr. S. Amis and others are of opinion that no smelts less than five inches should be taken; all of less size than five inches to be immediately returned into the water. The little smelts that the better class of fishmongers will not purchase of the catchers are hawked about and sold for a mere nominal sum, and sometimes they will not fetch any price. There is a ready market for *large smelts* at 3 *s.* a score.

The restrictions I should recommend for the smelt fishery at Yarmouth should be the same as those I have advised for Lynn, *see* page 46.

The Broads of Norfolk and Suffolk.

The Broads are fresh-water lakes, varying in size and depth. There are nearly 50 altogether in Norfolk and Suffolk. If the Serpentine was surrounded by a jungle of reeds and rushes extending a considerable distance out from the bank, a good idea of a Norfolk Broad, on a small scale, will be obtained. Some of the largest Norfolk Broads would cover the space of many Serpentines.

At the first day of my inquiry at Yarmouth, it became obvious that, in order to carry out the instructions given to me by the Under Secretary of State, to the satisfaction of the owners of property in Norfolk, and also of the inhabitants of Yarmouth, Norwich, and other large county towns, it would be necessary to extend my inquiry into the Broads of Norfolk, "in order to ascertain whether it is expedient that they should be placed under regulations adapted to prevent their being wasted, and to preserve them for the future." I have the honour to enclose a copy of a letter forwarded to me by Mr. R. R. B. Norman, a gentleman residing at Yarmouth.

Collingwood House, Great Yarmouth,
Sir, 15 June 1875.

The evidence given before you by the deputation from Norwich of the Yare Angling Association, respecting the Norfolk rivers and broads, on Thursday last, is considered of so much importance that many gentlemen of this town, and the surrounding district earnestly hope you will not leave Norfolk without an official inspection of the most important broads and rivers of this county, including the Waveney and Oulton Broad in Suffolk. It seems to us a monstrous injustice that about a dozen men should deprive hundreds of others obtaining a living, and also prevent immense numbers of people enjoying their favourite sport of angling, as they might readily do, now that there is easy access by railroad to most of these waters, and with fair fishing, the sport in them is literally inexhaustible over thousands of acres. Other kinds of fish, more valuable in every respect, might be introduced into these noble sheets of water; but it would be useless making any efforts at all while the present wholesale destruction of fish in season and out, goes on.

Your obedient servant,
To Frank Buckland, Esq., R. R. B. Norman.
Inspector of Fisheries.

I therefore considered it my duty to examine these broads and rivers, and to inspect a considerable number of them personally under the guidance of Mr. Norman.

The following statement gives a general survey of the inland water system of Norfolk and Suffolk. It has been drawn up with great pains by my friend Mr. Norman, whose valuable assistance in this matter, as well as many other points mentioned in this Report, I here beg most gratefully to acknowledge.

The River Bure falls into Breydon water at its south eastern extremity near the Vauxhall Railway Station, Yarmouth; this river runs through flat lands, and its total length is about 70 miles. The first affluent into the Bure is Muck Fleet, a stream which drains a large lake called the Ormesby Broads, but is not navigable. These Broads consist of seven sheets of water, intersected by two causeways. They contain 700 acres of water which, in the group of Ormesby Broads, is so pure, that the population of Yarmouth, Southtown, and Gorleston are supplied from them.

The seven sheets of water forming these Broads are named as follows; viz., from the south to the north: 1st. The Old Burgh Broad. 2nd. The Filby and Burgh Broad. 3. The Filby Broad. 4. The Water-lily Broad. 5. Rollesby and Ormesby Broad. 6. The Waterworks Broad. 7. The Hemsby and Martham Broad.

Angling is permitted in all these broads except Filby, although they are private property. They belong to Captain Ensor, of Rollesby; the Rev. Charles Lucas, of Filby; the Rev. Charles John Lucas, of Flegg Burgh; Mr. Robert Copeman, of Hemsby; and Mr. Thomas W. Daniel, of Thrigby.

Practically, any fair angler going to the fishing establishment at the sign of the "Eel's Foot," kept by Mr. Munsey, will be allowed to fish all these broads, except Filby Broad, which is reserved by the proprietors for private use.

Proceeding towards the north-east, and passing under Acle Bridge, the Bure receives by far its most important tributary, namely, the Thurne, which joins it at Thurnemouth. The River Thurne drains the water from no less than five broads: viz., Hick-

ling Great Broad, 500 acres; Horsey Mere, 120 acres; Martham Broad, 70 acres; Heigham Sounds, 150 acres; and Whiteslea Mere, 15 acres. In Hickling Broad, though shallow (from 3 to 4 feet), the water is remarkably pure. Martham Broad is to a great extent blocked up with weeds.

Returning to the main river, we find that at Thurnemouth the Bure turns to the north-west; at about the distance of two miles it receives the drainage of the South Walsham and Upton Broads, and on the other side, near St. Bennet's Abbey, the River Ant. The Ant drains Barton Broad, a noble sheet of water, and several other small Broads altogether over 300 acres. Wherries ascending from Yarmouth pass up the Bure as far as its junction with the Ant; this river is made navigable to North Walsham by means of an inland navigation, called the North Walsham and Dilham Canal, and a large traffic is carried on, to and from Yarmouth. Coals, goods, and timber are taken up country; and corn, hay, and reeds, cut from the margins of the Broads, are brought down.

The Barton Broads are now strictly preserved by the owner, Sir Jacob Preston, Bart.

As the River Bure turns still further north-west, we come to the outlet of the Ranworth Broads, 150 acres. These are the property of Miss Kerrison, of Ranworth Hall. In a bend of the river at Horning Ferry is situated the greatest resort of anglers in Norfolk, viz., the "Ferry Inn," kept by Mr. Crow. The river itself (but not the Broad) is free to the public for angling.

Proceeding still further north-west, are the Hoveton Small Broads, about 80 acres, and then Hoveton Great Broad, 123 acres, belonging to Rev. T. J. Blofield; also Woodbastwick Broads, 40 acres.

We then come to Salhouse Broads, belonging to Sir Henry J. Stracey, Bart., near these are Wroxham Broads, the property of Mr. R. Blake Humfrey and Mr. A. J. N. Chamberlin, altogether about 200 acres. The Bure then flows north-west, under Wroxham Bridge, draining several other small pieces of water at Belaugh.

This then completes the list of Broads which are drained by the main River Bure. We must now turn our attention to the River Yare. Immediately above Great Yarmouth there is a large tidal lake called Breydon Water, 1,200 acres; vessels sail through the middle of this up to Norwich. This portion of Breydon is, in fact, the River Yare flowing through it. Breydon Water is nearly four miles long, and in some parts a mile in width. The distance from the south pier at Great Yarmouth to the New Mills, Norwich, by river is 32 miles. Barges can go no further than these Mills. Upon this course of river there are two Broads, viz., Surlingham and Rockland; together these Broads contain nearly 130 acres of water, and are the great spawning grounds of the Yare, but fearfully poached all the year round. The River Yare above Norwich is commonly called the Wensum; there are no Broads above Norwich. At the north-west end of Breydon the River Waveney joins the Yare under the walls of Burgh Castle. Only two large Broads flow into this river, which is nearly 70 miles in length, viz., Fritton Decoy or Lake, containing 500 acres of water, nearly all the property

property of Lady Crossley and Colonel Leathes, of Herring Fleet Hall. Fritton Lake is mostly very deep, and has a muddy bottom. Passing on south-east the Waveney then flows to Oulton Broad, over 110 acres, and has a second outlet to the sea at Lowestoft through Lake Lothing, which is a mile and a half long. The Waveney for many miles forms the boundary between Norfolk and Suffolk; and its head waters rise within a few feet of the Ouse, which flows on to Lynn Wash. Thus it will be seen that in the counties of Norfolk and Suffolk there exists a magnificent chain of inland lakes containing nearly 5,000 acres of water, connected with the sea by about 200 miles of river, the greater part of which is navigable.

I observed an immense number of small fry in these Broads (where no netting is allowed). In the rivers and Broads infested by the poachers I did not see a single fish.

For many years past these rivers have been utterly neglected except in cases where private proprietors have paid some attention to them. The only enactments which came to my knowledge were those of the "Yare Angling Society." The following is a copy of the rules, orders, regulations, and bye-laws now in force under the authority of the Mayor and Corporation of the City of Norwich. These were passed on 9th November 1868, under the City of Norwich Act, 1867. A deputation of the Yare Angling Society waited upon me at Norwich and put into court the Fishery laws which are now enforced in their district, of which the following is a copy:—

Regulation of the Fishing and Preservation of Fish in the Rivers Yare and Wensum within the Corporate District.

18. No person or persons shall use any net or other engine (except lines), or construct any weir enclosure, or trap with stakes, oziers, or otherwise, for taking floating fish in any parts of the Rivers Yare or Wensum within the jurisdiction of the Body Corporate of the Mayor, Aldermen, and Citizens of the City and County of the City of Norwich, except as hereinafter mentioned.

19. Cast nets or drop nets may be used between the Tenth day of March and the Twelfth day of May (both inclusive), for taking smelts between The New Mills, in the parish of Saint Swithin, and the junction of the Rivers Yare and Wensum, known as Trowse Hythe, but not elsewhere.

20. Cast nets may also be used for taking small fish for bait, which shall mean and include roach, dace, gudgeons, and other small fish measuring not more than eight inches from the nose to the fork of the tail.

21. All fish measuring more than eight inches as aforesaid (whether caught when netting for smelts or bait) shall be returned immediately to the River, and without unnecessary injury.

22. Skim or skein nets may be used in any part of the said Rivers within the said Corporate district, for taking eels only, except during the months of April, May, and June in each year.

23. Fish of all kinds may be taken at any time and in any part of the said Rivers within the Corporate district by line or lines; but no person shall use any paste or other material with which has been mixed any drug or article of a poisonous nature.

24. Any person offending in any of the matters aforesaid will incur a penalty for each offence not exceeding forty shillings, and forfeiture of the nets or engines used, and all fish then taken or found in their possession.

25. Any person found fishing within the said Corporate district with nets or engines of any kind, except as aforesaid and as hereinbefore permitted, or using

any drug or poisonous article for the purpose of taking fish, shall, on request of the Water Bailiff, or his assistants, or any police constable, give him his true name and address, and any person giving a false name or address, or refusing to give his name or address when requested, will incur a penalty not exceeding forty shillings for each offence.

26. Every person who shall assault, abuse, or in any manner obstruct the Water Bailiff, or his assistants, or any police constable in the exercise of his duty, shall incur a penalty not exceeding forty shillings for each offence.

None of the foregoing Bye-laws shall operate to prejudice, alter, or take away any rights or interests of Her Majesty, her heirs or successors, in the foreshore or bed of the River Yare below high-water mark.

(signed) E. K. Harvey, Mayor. (L.S.)

A copy of the foregoing Rules, Orders, Regulations, and Bye-laws were on the 19th day of November 1868, forwarded to Her Majesty's Principal Secretary of State for the Home Department pursuant to sec. 90 of the 5th & 6th William 4, chapter 76.

The district to which the above bye-laws are applicable is only from the New Mills at Norwich down to Hardley Cross, a distance of 18 miles.

I have taken evidence from a large number of proprietors and gentlemen directly interested in the Norfolk Broads and their fisheries. It appears that not only the Broads, but the navigable rivers connected with them, are extensively netted, and the fish sent to inland towns and sold for 1 *s.* per stone, or used for manure. Mr. Burroughes, of Norwich, states that the interest of the Broads was often divided amongst small proprietors, who would give permission to the "Yarmouth pirates," as he called them, to fish. They were generally drawn in the night by nets, and tons of small fish were sent into the midland districts during the spawning season.

Mr. Diver, town clerk of Yarmouth, stated that there were facilities given to poaching, and great complaints were made of over-netting the rivers which were connected with the Broads. There was no close season on the Broads, but they were fished whenever it was considered likely that a market could be found for the fish. There was no doubt that a large number of fry were thus destroyed, as the nets sometimes used in this fishing were of very small mesh. The Mayor and corporation had no jurisdiction over the fisheries. No doubt in former years the corporation assumed certain rights with regard to the river fishing, but no such rights now existed. The sea and Broad fishing were under no regulations whatever, and people did what they chose.

Mr. Barwell stated that the men who got a living by netting the Yare were not more than six. Mr. Green, of Norwich, stated that most of the fish described by Mr. Norman as being used for food were used for manure. Mr. Bly, town councillor of Yarmouth, informed me that at the North Quay he frequently had seen large quantites of fish delivered from wherries, and sometimes as much as two tons of fish in the hold of one wherry; they consisted of roach, bream, perch, pike, &c., of all sizes and ages. The netting was carried on all the year round, without respect to time, place, season, or mesh. Since the Mayoralties of Mr. Samuel Palmer, 25 years ago, and Mr. E. H. L. Preston, the town authorities of Yarmouth

Yarmouth have not interfered with this wholesale destruction of fish in any way.

I understand from Mr. Norman that Mr. John Nash, 33, King-street, Yarmouth, has a metal model of a flat fish, the shape of a flounder, which was dredged up out of the mud in Yarmouth Harbour. It is two inches and five-eighths across in the widest part, and on it are impressed the Yarmouth Arms; it was probably used at some early period as a scale for measuring the mesh of nets.

During my inspection of the Broads I examined several witnesses, fishermen and others. Their evidence universally proved lamentable diminution both in the size and quantity of the fish. One old man, John Green, shoemaker, nearly 90 years old, who gave evidence at Ludham, informed me, "formerly he could go out with his 'pole and tow' (rod and line), and catch a rare mess of good fish in a couple of hours, and now there are hardly any left." Another witness informed me that he had known two tons of fresh-water fish caught in the rivers and Broads sold at Yarmouth for 7 *l.* 10 *s.* per ton. There are 2,240 lbs. in one ton. Thus these fish, fry and breeders, did not realise a farthing per lb.; half of these were thrown on the land, and not used for food at all. If left alone for a few months the fry would have grown, while the parent fish would have largely increased the stock in the river. There is another cause of destruction of fish which I must not omit to mention. The Rev. T. Berney, of Bracon Hall, Bracon Ash, Norwich, writes me:—

"I beg leave to bring under your notice one extraordinary cause of destruction of the spawn on the River Wensum. The meadows in some localities were banked out, stopping the mouths of all the ditches, and when such is the case the fish necessarily lay their spawn upon the weeds in the river. Then, some time (in June, I think), the weeds are cut by gangs of scythes hinged together, and reaching across the river, and drawn alternately towards one side and the other. The weeds with their *living freight* float down the stream till each farmer that wants them puts a rope across, or a beam, to stop them, and they are then dragged out and put upon the land to grow turnips.

"My father once asked how I accounted for the fact, that whereas there used to be great shoals of dace and roach all the way up the river, thousands upon thousands, there were then but few to be seen. Was it otters? I gave him the reason given above, and he agreed at once that it was a complete answer to the question. Nevertheless the men still come cutting the weeds. If the operation were put off for six weeks, perhaps great good would arise. The only persons interested in the cutting of the weeds are the *millers;* they do it to let the water down to their mills. But get a clause into the Bill to prohibit the cutting of the weeds, and the fish of very many kinds will increase *enormously.*

(signed) "THO. BERNEY."

Mr. Thomas Barber, King-street, Yarmouth, has repeatedly seen men netting the Broads and rivers, and also private waters; they took immense quantities of fish; these fish were put into wherries and taken to Yarmouth for sale.

The

The nets used by these men are of great length and depth, and they fish all the year round, especially during the spawning season.

I here beg most seriously to call attention to the terrible state of the river just below Norwich. More than one-half of the river was black as ink; the pollution was as bad or worse than any I ever examined, and I observed several fish floating about dead. Fish cannot live in such polluted water, and those who, when boating, live on it, or, when not boating, live near it, are in jeopardy of injured health, if not worse. The authorities should take immmediate steps in this matter.

The Suffolk Fresh-Water Fisheries.

At Lowestoft an influential deputation of landed proprietors and others connected with the Waveney waited upon me; amongst them were the Mayor, Vicar, and Town Clerk of Beccles, two of the Haven and Pier Commissioners for Norfolk, and several County Magistrates for Suffolk.

Mr. Masters, Mayor of Beccles, through which town the Waveney flows, gave evidence that the great grievance is the non-protection of this river, which is very productive of fresh-water fish. A great loss to the public takes place from fishing with a very fine mesh. If protection were instituted, the general production would be very much increased. The Corporation of Beccles have no local Act like the Corporation of Norwich. The river is tidal up to the bridge. There are only about ten persons who would oppose the idea of protection. The Rev. F. Tracey, rector of Beccles, deposed that a little more than a year ago he sent a circular on this question to the owners of property in the vicinity of Beccles. A large majority have expressed their concurrence with the proposal, and no dissentient voice has been raised against the proposed protection of the Waveney; *i. e.*, first, an annual close time for fresh-water fish; secondly, a larger mesh of nets. Mr. Edwards, one of the Yarmouth Haven Commissioners, stated that, as secretary to the fishing club on the Oulton Broad, that he was aware the club was anxious that the fishing should be better protected. Mr. Boyce, of Beccles (an angler), stated that excessive netting was carried on all the year round, and the mesh was very small. He recommended a close time from the 1st of April to the 1st of June. The price is about 1*s.* a stone for bream, roach, dace, and rudd.

Mr. Mercer, fish salesman, said these poachers contract with one of the buyers to supply fresh-water fish at so much per stone, and the fish are sent away to Birmingham and other large towns. The fish are hardly worth catching for food, they are so small. Roach, bream, dace, and rudd are sold at 1*s.* per stone. They ought to be left till they are grown larger.

Mr. Cragg, net manufacturer, of Lowestoft, stated that nets were often used one-third of an inch in diameter, or one inch and one-third in circumference. A mesh of this kind would easily catch a fish as small as an ordinary cedar pencil. He thought the minimum size of the net used for fresh-water fishing should be one inch and a half.

Mr.

Mr. Mason, of the "Wherry Inn," Mutford Bridge, stated that he has seen boats loaded with fresh-water fish pass through the lock on many occasions. These fish are taken in and out of season; they are caught with long nets having a very small mesh. About six men do little else but poaching, and set the neighbourhood at defiance. He complained very much at the injury done to the neighbourhood by the destruction of fry and breeding fish in the spawning season. If a close time was enacted, the fisheries of the Waveney would be greatly benefited. The principal poaching goes on in March, April, and May.

The question of the right to fish in Oulton Broad was brought before me, as also the written opinion of Mr. Manisty. The excessive netting goes on right up the river as high as Reedham, where the New Cut from the Waveney, two and a half miles long, flows into the Yare, twelve miles from Lowestoft.

Convictions have already been obtained under the 24 & 25 Vict. c. 96, s. 24. This was for unlawfully and wilfully attempting to take, otherwise than by angling, fresh-water fish between the beginning of the last hour between sunrise and the expiration of the first before sunset. This was obtained under the Poaching Preservation Act. After the Court had adjourned, I obtained the following evidence from Mr. William Everitt. That the weeds protect the fish from the netters in the summer. The mischief is done in February, March, and April. Tons of fry and parent fish are brought down and sold to the Jews in Lent, or to the French fishermen for bait. The Colchester trawlers came round last summer and trawled right up the centre of the river. They caught as many as from 10 *l.* to 15 *l.* worth of eels at the first haul.* Other fish were caught with these nets, and others destroyed by the enormous quantities of mud turned up with the trawl net.

As regards legislation for the Waveney,† I am of opinion that should

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* *Vide* page 56.

† Since my inquiry at Lowestoft I have received the following:—

River Fishery Protection.

Sir, Bungay, 1 July 1875.

We were unfortunately prevented from attending the meeting you held at Lowestoft, on the 16th inst., but we are informed that a gentleman from this neighbourhood stated that with regard to the River Waveney no further protection was wanted above the locks; that is, we presume, above the navigable portion of the stream, as the private owners could protect themselves. This, however, is by no means the case, for the river bounds two large tracts of common land which are open to anybody, and from the present unsatisfactory state of the law upon the subject the owners of the soil have, as yet, failed to prevent the stream from being most cruelly netted and poached. We represent several large estates abutting on the river, and we know the owners would gladly welcome any scheme for putting a stop to such a system of wholesale slaughter, and which would besides lessen the inducement for committing trespass.

We hear from persons who understand such matters that the Waveney about here is a very good breeding stream, and if properly protected would yield a large amount of fish.

We do not know how far this information may be of use, but we shall be happy to afford any further information you may require.

We are, &c.

Frank Buckland, Esq. (signed) Hartcup & Sons.

should a general Act for the preservation of the fresh-water fisheries take place, that the Proprietors would be glad to avail themselves of the provisions of the Act, and that they are perfectly capable of adapting any provisions of the law to the peculiar conditions of the rivers of Suffolk.

It would be superfluous to add further evidence of the enormous destruction done to the fish of the Broads and rivers connected therewith.

After a careful consideration of the whole subject, I have come to the conclusion that the time has now arrived when it is imperatively advisable that the fresh-water fisheries of Norfolk and Suffolk should be scientifically cultivated. The willingness to take this matter in hand is widely spread amongst all classes of society dwelling in the neighbourhood of the above-named rivers and Broads. From personal examination I am enabled to report that the rivers and Broads are most admirably adapted for the breeding and fattening of such indigenous fish as belong to the species of carps, breams, perches, and so forth. The temperature of the water in the spring and summer months is such as to be favourable to the breeding of these fish; fish of this kind do not, like the salmon, require gravel beds and running water; they, on the contrary, naturally deposit, or rather suspend, their spawn on the water weeds, and other aquatic plants. The borders of the Broads are, for the most part, margined with dense jungles of reeds, while at the same time the bottom is planted with forests of sub-aqueous vegetation; so that there are many hundred miles of spawning ground available for the fish which live in these waters.

Common river yellow trout are found in some parts of Norfolk. Mr. John Fountaine, of Southam, Brandon, writes me:—"Trout breed very freely in the Nar. I see them every year upon the spawning beds, and have taken them from the beds myself to breed from artificially. They are the common river yellow trout, and not the sea trout or white trout, of which I have killed thousands both in Ireland and Scotland, and know the difference well. These trout were introduced into this river by my grandfather, about 100 years since, from some trout given to him by Lord Orford, which were turned into spring ponds then existing at Narford, and which communicated with the river. I perfectly remember the trout breeding in a rivulet which supplied those ponds, and which was itself supplied *entirely* by springs. The trout could pass from the ponds into the river below, but it was quite *impossible* for any fish to rise over a cascade falling perpendicularly, nearly 6 feet in height at the end of the pond."

I was pleased to hear from Mr. Venning, of Norwich, that artificial breeding of trout has taken root in Norfolk. Trout fry had been turned down by Lord Orford, Lady Lothian, Mr. Lubbock, of Hanworth, near Cromer, and Mr. C. Louis Buxton, of Bulwick Hall, Marsham. Great lake trout have also been bred by Mr. J. J. Colman, M.P., of Norwich.

I should also recommend the artificial cultivation of the indigenous white fish by the Chinese method of fish culture, of which the following account is given in "Collyer's Geography":—

"It

"It will not here be improper to mention the method by which the Chinese stock their ponds and pools with fish.

"In the month of May the country people place mats and bundles across the River Yang-tse-Kiang, in the province of Kiang-si, leaving only room for the passage of the boats. These bundles stop the spawn, which, together with the water, they convey into proper vessels and expose it to sale; after which it is carried into different provinces for the purposes already mentioned."

In this country I advise the use of hurdles, between the bars of which long branches of coppice wood or reeds should be interlaced. The hurdles thus prepared should float on the surface of the water, and may or may not be made fixtures; both plans should be tried.

As regards the introduction of new kinds of fish into the Broads, I recommend—

1. The golden tench, which has been so successfully acclimatised by Mr. Burr, of Aldermaston Park, Reading. I am happy to be able to report that Mr. Norman has now in his tanks at Yarmouth 16 fine golden tench, which Mr. Burr wishes to present to owners of Norfolk Broads. They were caught with rod and line, at Aldermaston, by Mr. Burr, The Right Hon. A. H. Layard, British Minister at Madrid, and myself, expressly with a view of commencing the stocking of the Norfolk Broads.

2. The speigel, or "looking-glass" carp, from Germany.

3. The pike perch, or zander, also from Germany.

4. The great lake trout of Switzerland.

5. The Salmo Fontinalis, or brook trout of America.

Impregnated ova of the two latter kinds of fish can be obtained every Christmas from Switzerland and America.

Three points, therefore, naturally occur to the fish culturist as necessary for the cultivation of the magnificent fish farm of the Broads. These points are—1st, annual close time; 2nd, mesh of nets; 3rd, the regulation of other fishing engines. The engines principally used in the Norfolk Broads are drag nets, bow nets, eel nets, and flue nets; and what may be called floating fixed engines, viz., liggers, or trimmers, and night lines; these liggers are of two kinds, viz., drifting and anchored. The drifting liggers are most destructive to pike.

Wishing to have a consultation with the proprietors of the Broads, and the anglers, both rich and poor, directly interested in the Broads, I requested that they would be good enough to meet me in consultation. At Norwich Mr. F. Sutton, of Norwich, was kind enough to arrange this meeting, which was attended by many proprietors of Broads, including Mr. R. H. Blake Humfrey, Mr. A. J. N. Chamberlin, the Rev. T. J. Blofield, Mr. Gurney Buxton (ex-mayor of Norwich), and many other gentlemen. The meeting was presided over by Mr. J. J. Colman, M.P., and Mr. C. S. Read, M.P. At this meeting the following resolutions were proposed, seconded, and passed:—

 1. That

1. That legislation for the preservation of the navigable portions of the Rivers Wensum, Yare, Bure, and Waveney, and their affluents, is urgently required in the public interest.

2. That it is also the opinion of this meeting that such legislation should extend to the Broads connected with such rivers and their affluents, so far at least as to secure a close time during the spawning season.

3. That upon the navigable waters all netting be prohibited, except as respects eels and smelts, and then only under special restrictions.

4. That it is not desirable to enact fence months against angling.

5. That upon the Broads and spawning places, and the waters connecting them with the navigable rivers, all netting shall be prohibited absolutely between the 25th day of March and the 25th day of June.

It will of course be expected in this place that I give my opinion on these resolutions.

I agree with—

A. The desirability of protection by law.

B. The desirability of an Annual close time.

I am glad that the meeting agreed that the law of close time should apply to private as well as public property. Mr. Blake Humfrey, at the meeting at Cromer, stated that he had consulted several owners of Broads upon the subject, and that, taking the Bure downwards, there are nine large proprietors of rivers and Broads who are in favour of legislation to establish an Annual Close Season, and that three other owners are indifferent, on the ground that they can preserve for themselves, or that they are indifferent to fishery questions. He had communicated with many landed proprietors in the neighbourhood of the Bure, with the result that he found no opposition. As regards putting in force the provisions of any legislation which Parliament may see fit to enact, I would observe that the gentlemen who ask for this legislation assure me that they themselves will, if the Law be put into their hands, find means to carry it out.

In the Appendix will be found the draft of a Freshwater Fisheries Bill, prepared and brought in by Mr. Neate and Mr. Malins, and ordered by the House of Commons to be printed, 2nd June 1874.

Though agreeing with the general principles of the Bill, I do not agree with some of the details, especially the test of fish by weight, not size. It will however form a good model for any future Bill.

I append also the regulations now in force on the Thames under the authority of Thames Conservancy Board, and carried out by the "Thames Angling Preservation Society" and their able Secretary, Mr. Brougham; also the rules of the Piscatorial Society of London submitted to me by Mr. T. R. Sachs, a very experienced angler, and late Secretary to this Society. The present Secretary is Mr. James Lander, who, with Mr. Brougham, will be glad on the part

part of the two above-named societies to give any information in their power. These rules have been carefully considered and drawn up by the Piscatorial Society, one of the most influential, and active, and practical angling societies in London, and have also been adopted by other societies. They have been in force since 1838, and have acted well. Their adoption should be considered by the Norfolk fishery proprietors.

I have come to the conclusion that should the Legislature determine on passing any law affecting the freshwater fisheries of Norfolk and Suffolk, the carrying out of its details in the form of Bye-laws, such as Annual close time, Regulation of mesh of net, use of liggers, &c., should be entrusted to a local board of Conservators. Bye-laws thus made by local boards of Conservators must of course receive the approval of the Home Office, following the precedent of the Salmon Bye-laws made by Conservators of salmon fishery districts under the Salmon Fishery Act, 1873.

If Legislation based upon the outlines above laid out were enacted, I am of opinion that the fisheries of the Broads and rivers of Norfolk would, in a comparatively short time, increase to a very large extent, to the benefit of the riparian proprietors, and the public generally; while at the same time sport for anglers of London and its vicinity, as well as those of the large inland manufacturing districts, would be greatly increased.

Instead of tons of breeding fish and their fry being used as manure, or even wantonly wasted, as now, the supply of fresh-water fish to the manufacturing and other districts would be greatly increased. This new legislation for fresh-water fish would correspond with the objects of the Salmon Fishery Acts, the practical result of which is to increase the supply of food for the people.

In conclusion, I have to advise the Home Secretary that it is, in my opinion, expedient that the rivers and Broads of Norfolk and Suffolk, as above described, should be "Placed under regulations adapted to prevent their being wasted, and to preserve them for the future." These regulations should be as follows:—

1. That a Board of Conservators should be constituted for the management and regulation of the fisheries of the rivers and Broads of Norfolk and Suffolk. This Board should have power to make Bye-laws subject to the approval of the Secretary of State for the Home Office.

2. That there should be an Annual close time for all fish frequenting these Broads and rivers.

3. That this Annual close time shall commence on the 1st of March and terminate at midnight on the 31st of May.

4. That the Annual close time should apply equally to private and to public waters.

5. That no close time for rod and line is required.

6. That for the present it is advisable to enact the Annual close time only. Power however should be given to the

Board of Conservators to pass Bye-laws, subject to the approval of the Home Office, as to the regulation of mesh of net, and use of liggers, cutting of weeds, &c.

7. That trawling in the rivers (*see* Lowestoft case, page 33) should absolutely be prohibited.

Fisheries of Lynn, Wells, and Cromer.

The result of my inquiry at Lynn is as follows:—Lynn Regis is a very ancient town on the east side of the Great Ouse River, about four miles from an extensive estuary called the Wash. From Hunstanton Point in Norfolk to the Lincolnshire coast at Wainfleet, this estuary is 16 miles wide, and altogether about 13 miles in length. It receives the Great Ouse, Nene, Witham, Welland, and several other rivers, which bring down a great quantity of alluvial matter, and the shores being formed of soil that is easily washed away, an immense amount of deposit has formed, especially near the mouths of the various rivers. Two-thirds of this immense area are sandbanks, dry at low water spring tides; the remainder is from five to 16 fathoms deep. Seals are frequently seen on the sandbanks near "Lynn Well light vessel;" this part of the Wash is also known as Lynn Deeps, and is close to the Norfolk coast. The River Nar, a tributary of the Great Ouse, contains trout; also another small stream flowing into the Wash near Castle Rising.

The whole of the Wash from Skegness in Lincolnshire on the north, to Gore Point on the south, is now under the regulation of the Sea Fisheries Act, 1868; the total area thus protected is about 180 square miles. This large tract of ground is worked under the clauses of the above-named Act by the Corporations of Lynn and Boston. Evidence was given by Mr. Frank B. Archer, Deputy town clerk, that at Lynn there are no cod, a few small whiting, long-shore herring in the winter, occasional mackerel, soles (best in May, June, and July), no turbot or congers, no crabs or lobsters, a considerable quantity of eels, smelts, and some anchovies. The principal fisheries are eels, shrimps, oysters, and mussels; the *soles* have diminished one-half in the last five years, both in quality and size; a good sole is from 10 to 11 inches long. Four years ago the fishermen used to catch from 40 to 60 pair in one trawling; 20 pair are now considered an average catch. The trim nets and the small mesh nets destroy great quantities of young soles; the fishermen say they return the young soles to the water, but I doubt much whether they are alive when returned. The following has been communicated by letter from a gentleman experienced in the local sea fishery:—"The soles are destroyed by the shrimp trawls. I think that they have decreased one-half in the last 10 years; yet there are, no doubt, plenty for some short time in the year. The legal length to kill them is 5 inches, but it ought to be 7, above which they are good, small soles being the best at Lynn; a Lynn sole of 18 inches is not so good as a south-coast sole of the same length. I think that from 20,000 to 30,000 young soles during the summer, from 2 to 4 inches long, are killed every day about here by the

the shrimping boats. I have often counted 300 and 400 in a haul, and in hot weather few survive; so 50 boats killing 500 each will make 25,000, and very often it must be a great deal more. I was out June 1871, and in my first short haul threw overboard 200; and though we considered we caught no soles that day, yet I took home about 70, the largest not 9 inches. It takes upwards of 400 average soles to fill a bushel basket, but a great many more if you take them 7 and 8 inches; but we never do here unless we can catch nothing else. The fishermen throw the small ones over board, but most of them die, especially in hot weather, as it takes some time before they can be thrown back. Soles are not often caught in drawing for smelts, only 'flat fish.'"

On 3rd August 1875 I received from Lynn samples of little soles. Eighteen of these weighed 7 ounces only, they averaged 4 inches long, and 1½ wide. Preparations of these soles and shrimps can be seen at my fish museum; a great many of them are not larger than a common house fly.

The shrimp nets destroy vast numbers of minute shrimps.

There are 150 sail of boats sailing out of Lynn, one-third of which are decked; others are half decked, some are open. The decked boats have four hands, the half-decked two men and a boy.

	Men and Boys.
50 decked boats - - - - - -	200
100 half decked and open boats - - - -	300
Total Men and Boys employed in the Lynn Fisheries are - -	500

Evidence was given of great destruction of fry of all kinds by trim nets. Peeles or pecks of small soles not more than 3 inches long are brought up every week, especially in the summer time. Small plaice and other fry are also destroyed.

Complaints were also made with regard to destruction of smelts.* They begin to catch small smelts at the beginning of June; the price in June is 6*d.* to 2*s.* a hundred, six score to the hundred. In winter these same fish would be worth 2*s.* to 2*s.* 6*d.* a score. Mrs. Devonshire, who has kept a fishmonger's shop for 30 years in Lynn, stated that, in her opinion, the fishermen ought not to be allowed to take the smelts until the latter end of August. Smelts which are in June the size of a finger would, in August, be 6 inches long. No smelts should be allowed to be taken under 5 inches in length. Smelts spawn in March and April; they inhabit fresh water (according to Yarrell) from August to May.

I have every reason to believe that smelts would thrive in some of the Norfolk Broads or other fish ponds, even though they would then have no access to the sea. The experiment of acclimatising smelts in fresh water should be tried.†

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* *Vide* Yarmouth Smelt Evidence, page 26.

† The Hon. W. Egerton, M.P., informs me that smelts are found in his lake at Rostherne Manor, Knutsford, Cheshire.

The Thames close time for smelts according to the Thames Bye-laws now in force is eastward of Purfleet from the 26th March to 31st October, and westward of Purfleet from 2nd May to 24th day of March.

The following report of a recent inspection was handed into Court by Mr. Harding, superintendent of the Lynn oyster and mussel fishery:—

"Trim or stow nets in use in the river Ouse between Denver Sluice and its outfall into the Wash. 4th June 1875.

Thos. Bates and David Kidd, residing at Magdalen.

Hy. Grimes,
Robt. Clifton,
Chas. Clifton,
Jas. Whitton,
} Residing at St. Germans.

Christopher Bouch, residing at King's Lynn.

"Christopher Bouch had his net set in Lynn Harbour on the 4th June, and caught about 2 pecks of good shrimps, ¼ peck of small sprats and herring, some buts, 2 herring about 9 inches long, 2 soles 8 to 10 inches long, 1 stinging fish, 2 sand eels, 2 anchovies, and 3 *smelts*. Mesh at the end of the net about the size of a cedar pencil when open.

"Was told by Bouch that about 20 years ago it was the custom that no draw net should be used until the mayor's feast, about the 21st October, and that they were discontinued in March.

"Also said that about 30 *years ago* it was the custom not to fit out *trim boats* until 10*th August*.

"Said that smelts come up the river about August, and stop up until about April, and that they shed their spawn in March and April. Begin to catch the young fry about 1 or 2 inches long about August.

"Said that anchovies are in the river May, June, and July. One of the anchovies caught by Bouch I opened, and found it to be full of eggs.

"The fishermen use the sprats, herrings, smelts, anchovies, &c. as bait for eel grigs.

"Thos. Bates set just below St. German's Bridge, 5th June, and caught several hundred sprats and shrimps, a few small soles, buts, 3 *smelts* and 1 anchovy.

"Bouch said he caught from 3 to 9 bushels of whiting in the winter; it used to be the custom to throw them away; he very rarely gets any longer than 3 or 4 inches."

The trim net is triangular at the mouth, being 16 or 17 feet at each side of the triangle, it is also 16 or 17 yards from the mouth to the swinge or end, the shale or mesh of the swinge, when opened, is about the size of a cedar pencil, when it is shut, a wire could hardly pass through it. A shrimp trawl net is from 15 to 35 feet in length across the trawl beam. The difference between the modes of fishing these two nets is most worthy of notice. The trim net is set with its mouth open against a stream to catch all comers, little and big; the trawl net, on the contrary, hunts and

follows

follows the fish in the open sea, and although its meshes are small, yet the fish have a certain chance of getting away from it.

I also was informed by some gentlemen returning from Lynn market, that vast quantities of sprats were used as manure every year, these were caught in the neighbourhood of Lynn. Sprat manure is considered to be very beneficial to the crops.

I was informed that last winter there were very few sprats, the year before 100 tons were sold to one farmer. Another gentleman bought 25 tons one day. Sprats are caught in such quantities in the season as to completely glut the market, and after that they are sold for manure, fetching as much as 28 *s.* per ton, being nearly as much as the price for human consumption.

Subsequently to the inquiry, I received the following letter:—

Athenæum Chambers, King's Lynn,
2 July 1875.

Sir,

The St. German's fishermen have consulted me on the subject of what took place when you held a meeting at the Town Hall, Lynn, and they have requested me to forward you (as I do on the other side) a letter addressed by one of their body to the editor of the "Lynn Advertiser."

I shall be obliged if you will read it carefully, and that you will give the matter to which it refers your best consideration.

I have, &c.

To Frank Buckland, Esq. T. M. Wilkin.

Of this letter signed David King, fisherman, Magdalen, I give an abstract. It is stated that there is no such thing as calico swinges used above the port of Lynn. A sample of the bait used for eels consist of sprats, shrimps, and grindlings; should a young sole or flounder be caught, they are soon returned to the water again.

Then follows a protest against the abolition of trim and stow nets, and a request that a net be sent up to the Home Office for inspection.

According to my request, therefore, two nets were sent up, namely, a trim net and a shrimp trawl net, I fixed these up carefully in the garden connected with my Fish Museum at South Kensington, and made a most minute examination. In both cases the meshes are largest at the mouth of the net and gradually diminish, the smallest mesh at the ends being about the size of an ordinary cedar pencil. Both these engines must be most destructive to fry; they would catch the smallest shrimps, or even half a shrimp.

The following Document was handed into Court by Mr. Archer:—

"Committee Book, No. 5.

"The Corporation of King's Lynn, on the 31st day of December 1858, passed the following Bye-laws for the protection of the Fishery (viz.):

"Corporation Fishery.

"*The Borough of King's Lynn.*

"We, the Mayor, Aldermen, and Burgesses of the borough of King's Lynn, in the county of Norfolk, pursuant to and in exercise and execution of the power and authority to us given by certain

Charters granted in the reigns of King Henry the Eighth and King James the First, do hereby make the following rules, regulations, and bye-laws for the protection of the fishery, the regulation of the fishing nets, and the good rule and government of fishermen (viz.):

"That from and after the 1st day of March next no nets shall be used within the limits of the fishery with smaller meshes than the following (namely):

"Herring nets, 7-8ths inch from knot to knot.

"Sole nets, 1¼ inch from knot to knot.

"Shrimp nets, 5-8ths inch from knot to knot (the cod or swinge part).

"Trim nets, 5-8th inch from knot to knot.

"Draw nets, 5-8th inch from knot to knot.

"That draw nets shall not be used between the 10th day of April and the 10th day of September.

"That stow nets shall be altogether abolished on and after the said 1st day of March next.

"And that all nets found contrary to the above regulations after the said 1st day of March next shall be seized and destroyed."

As to Mussels.

That from and after the said 1st day of March next no mussels shall be offered or exposed for sale which shall be under 2½ inches in length.

That all mussels shall be dressed at the beds where they are taken, and that small and refuse fish shall not be taken from the ground.

That between the 10th day of April and the 10th day of September in each and every year all fishing in the river above the upper end of the Norfolk Estuary Cut will be and the same is hereby strictly prohibited.

A Draft of a Bill "for increasing the supply of Sea Fish in the Wash," was also handed into Court. This Bill had been prepared last year by the Mayor and Corporation, in consequence of a memorial numerously signed by the fishermen and others interested in the fishery of Lynn. As this Bill has been very carefully considered and prepared, I now print it in full. (*See* Appendix, page 59.) The provisions contained in this Bill will materially assist future legislation.

The Oyster and Mussel Fishery at Lynn.

An "Order for the Regulation, by the Corporation of the Borough of King's Lynn, of an Oyster and Mussel Fishery in Lynn Deeps, being a Portion of the Estuary called the Wash, in the County of Norfolk," was granted in April 1872.

I was pleased to find this order had been of great service to the public. If it had not been for the enactments carried out by this order, the fisheries would have suffered severely, and it would have been difficult for the fishermen to obtain a living at the present time.

The

The Corporation of Lynn have expended a large sum of money in obtaining and carrying out this order. The benefits derived from it, however, have been so great that they do not regret the expenditure of funds, nor do they see any reason to discontinue it.

The Oyster Fisheries of Lynn.

Mr. Harding, borough treasurer, and bailiff to the Lynn oyster and mussel fisheries, since 1872, stated that there are seven principal beds, besides small patches of oysters in the fishery. The largest bed is about seven miles long, and averages half a mile wide, these are all natural beds. The bottom is composed of mud and sand.

Thirty-nine boats had been dredging last season from 1st of March till 1st of June, and it is supposed that they dredged up nearly 700,000 sizeable oysters; a tub of oysters is about five score, taking them as they come. Some of these oysters were sent to Cleethorpes in Lincolnshire to be fattened.

Oysters do not fatten in the Wash generally except on the Gore bed, where there is about 5 feet of water at low water, they also will fatten on a bed called the Roaring Middle, there are excellent fattening grounds at Heacham Harbour, and abundance of room for making "clares" or fatting reservoirs in the neighbourhood of Lynn. The expense of the corporation in keeping up the fishery amounted to about 271 *l.* a year; 100 *l.* of which is received back again for licenses, the cost of the licenses is 3 *d.* per week per ton, 9 *d.* per month, or 3 *s.* for the season.

Specimens of the oysters and "culch" just as dredged from the bottom of the sea were handed into court. I was pleased to find that the "culch" was naturally of an excellent quality, only that the ground seemed to have too much mud and slime about it. I regret to say I could find no traces of a general fall of spat. Mr. Harding stated that there had been a fall of spat in 1868, but there had been no fall of spat for the last two years; he is of opinion that the want of a fall of spat is attributable in some measure to "over dredging," but that temperature has a great deal to do with it. The temperature of the sea on the date of my visit was 56°, and in the sludge way 69°.

I was surprised to find no pains were taken to secure the enemies of the oysters. These are, firstly, five fingers (ordinarily called star-fish); secondly, dog-welks or borers; thirdly, broad weeds; fourthly, burrs—echini or sea-urchins. No attempt is ever made to destroy these enemies, but they are returned to the water; as many as 50 or 60 burrs had been brought up in one haul in the dredge.

I explained that one of the first necessities of good oyster culture was to destroy all the "sea vermin" that are enemies to the oysters, and I laid especial stress on the necessity of bringing ashore the five-fingers, the burrs, and the dog-welks. The five-fingers make excellent manure for the fields.

Recently a close time for oysters has been enacted under a bye-law allowed to be made by Order of the Board of Trade. The months of June, July, and August are now the close time for oysters.

I recommended that during the close time the beds should be examined from time to time, as it is more than probable that if the oysters are left entirely to themselves that five-fingers will settle upon and destroy them. It is also probable that the spat of mussels might injure them, by spinning their webs and collecting mud.

I also recommended that previous to the spatting time, the oyster beds should be cleaned by dredge-harrows or bush-hurdles:—this, of course, if the funds would allow of the expense. The water bailiffs could do this, while watching the beds, at a trifling cost.

The regulation size of the ring to gauge oysters on the grounds protected by the Corporation of Lynn, is two and a half inches. Fishermen, as a rule, obey the regulations; there are now two water bailiffs always on watch.

Mr. Harding has established a small artificial oyster-breeding place. This promises to be of great importance as, in my opinion, the two necessary ingredients for the obtaining of a crop of spat, *i.e.*, "Heat and Tranquillity," are here present. The tranquillity is naturally present. The heat can luckily be obtained artificially, as the steam from the boilers of the baths close adjoining can be utilized for the purpose.

As regards oysters at Lynn I am now in a position to advise that no further legislation is required in this particular locality.

This statement does not apply to public oyster fisheries in other localities, where it is more than probable that legislation is desirable.

The Mussel Fisheries of Lynn.

There are 17 mussel scalps under the protection of the Lynn Corporation. The largest is called the "Lower Daisly;" it is about half a mile long, and averages 300 yards wide. The bottom is mud. The mussels accumulate mud if the current is not strong; but they grow up as the mud accumulates. The number of mussels has greatly increased since the Order of the Board of Trade has been enforced. A spat of mussels took place in 1873; in 1874 there was a heavy spat of mussels; on the 3rd of May 1875 patches of spat were seen.

In the winters of 1873-1874, 2,480 tons were sent to market.

In the winter of 1874-5, 4,452 tons of mussels were sent to market.

In the winter of 1875-76, about the same quantity will be sent to market again.

In the winter of 1876-77, the supply of mussels will be scarce, as owing to the want of fall of spat there will be no young ones coming on.

There are 16 bags, or 32 bushels, in a ton of mussels, and each ton is worth about 1*l.* The average value, therefore, of the mussels of Lynn Deep is about 3,400*l.* per year.

The mussels are sent away to London, Sheffield, Birmingham, Leicester, &c. When a spat of brood is large enough, it is transferred by the water-bailiff to deeper waters, because the young mussels grow better in deep water than they will if left where they were originally spatted. By Section 3 of the Order of the Board of Trade, "No person shall dredge, or fish for, or take mussels within

within the fishery during the months of June, July, and August in any year." The size for the mussel to be taken is thus provided for by Section 19 of the above-named Order:—"No person shall at any time remove from the fishery, or from one portion of the fishing ground to another, any mussels of less size than 2 inches in length, or any oysters which will pass through a circular ring of $2\frac{1}{2}$ inches in diameter, measured on the inside of such ring."

As regards the mussels of Lynn Deep, I advise that no legislation is necessary.

Whelks at Lynn.

Perceiving, on the landing quay at Lynn, a considerable number of whelks packed in nets of a rounded form, I made inquiries into the whelk fisheries in these neighbourhoods, with the following result:—

The whelk fisheries have been carried on by Lynn fishermen for the last four years only. Having, as my informant told me, nearly exhausted the whelk fisheries in the Wash itself, the fishermen now go from ten to twenty miles out at sea to catch the whelks. They use pots baited with crabs, horse-flesh, &c., and only fish in the Wash when they cannot get outside. The whelks are only found along a certain zone at the sea bottom, for after a while the water becomes so deep that the whelks cannot thrive there.

Among the whelks in the nets at Lynn, I observed a considerable number of small shells, many of them not being larger than the top of a thumb. These little creatures are sent up to London, after being boiled with the others, and when they arrive at market they are riddled through a sieve, and the smaller ones are, of a necessity, not returned to the sea to grow. A fisherman informed me that they are obliged to change the whelk fishing grounds, on account of the whelks getting scarce; if this is the result of but four years' fishing only, unless the evil cures itself, the whelk fishery will shortly fall off, if not be destroyed. The remedy that I propose is simple and inexpensive; the whelks should be *riddled out at sea*, and not at Billingsgate Market, they would thus have a chance of growing into sizeable specimens, instead of *as now being altogether wasted.*

Provision should be made that these unsizeable whelks should not be allowed to be landed in any part of England; as, if the law were not made general, the Lynn fishermen would simply land their whelks in the Humber. That the whelk fishery at and about Lynn is very important to the neighbourhood, may be seen when I state on good authority that the annual value of this fishery is 6,000 *l.*

The minimum measure for the size of a whelk should be two inches and a quarter at its greatest length.

Mr. Frank B. Archer, Deputy Town Clerk, King's Lynn, writes me:—

"As regards the whelk fishery, I should state that the corporation have *never acted* in preserving any fishery, except at the instance of the fishermen and persons interested.

"The corporation have had no representation made to them in regard to whelks, and their proposed Act does not contemplate that fishery. I think, too, it will be found that the Treaty with the

French prohibits the regulation of whelk fishing beyond the Lynn limits, and the whelks are now caught beyond those limits. My own opinion is that whelks are prevalent in most parts of the North Sea; in fact, the Lynn boats now fish far beyond the Wash.

"The corporation have, at present, no application with regard to whelks."

Destruction of Small Fish at Lynn.

The question of legislating to prevent the destruction of the small soles and other sea fish at Lynn is difficult. The Report of the Commissioners appointed to inquire into the Sea Fisheries of the United Kingdom, 1866, Vol. I., contains several important recommendations as regards sea-coast fishings. It is written, "With respect to inshore fishing, although the evidence, as far as it is conclusive, appears to us to prove that the taking of small and immature fish has not yet produced any injurious effect upon the fisheries, it is undoubtedly possible that, by the use of improved engines, the destruction of fry might reach such a pitch as to bear a large, instead of as at present an insignificant, ratio to the destruction effected by the natural enemies of fish, and by conditions unfavourable to their existence.

"The existence of such a state of things, however, could only be determined by the examination of trustworthy statistics of the fisheries in question, extending over a considerable number of years. Should it ever be satisfactorily proved to have arisen, we conceive that the best remedial measure would be to place a restriction upon the size of the fish permitted to be brought ashore, and to subject the possessors of fish below a certain specified size to penalties; but to avoid interfering with the implements of fishermen, or with their methods of fishing."

In the case of the Lynn fisheries I think it has been satisfactorily proved that the "destruction of fry has reached such a pitch as to *bear a large,* instead of as at present *an insignificant,* ratio, to the destruction effected by the natural enemies of fish, and by conditions unfavourable to their existence."

I am, therefore, of opinion that the provisions asked for by the Corporation of Lynn (*see* Appendix, page 59), modified as follows, should become law for this special locality:—

Unsizeable Fish.

It shall be illegal to have in possession, within a certain distance of Lynn (say five miles), any unsizeable fish; that is,

Sole	less than	7 inches.
Dab	„	7 „
Flounder	„	6 „
Smelt	„	5 „

Each being measured from the nose to the end of the tail.

There shall be a close time for smelts between the 1st of April and the 1st of September in each year.

The

The other two recommendations, as regards the mesh of nets for smelts, should be also enacted. They read as follows:—

Section 3, Sub-section 1.—"No person shall bring to shore, buy, sell, offer, or expose for sale or exchange, or have in his possession for sale or exchange, any unsizeable fish anywhere within five miles of the Wash."

Section 3, Sub-section 4.—"No person shall fish for, catch, or attempt to catch, smelts with a net having a mesh of less than five-eighths of an inch in extension from knot to knot, measured inside the said mesh when dry."

Two of the recommendations made by the Corporation of Lynn under the Sea Fisheries Act are now in force, viz., a measure for mussels and oysters, viz.:—

A circular ring, $2\frac{1}{2}$ inches, for oysters.
And a measure for mussels of 2 inches in length.

Both of these regulations have hitherto worked very well; and it is therefore probable that the other recommendations of the Lynn Corporation, above recorded, if made law, would also prove successful in their results.

As regards the use of the trim net and the shrimp trawl net, I am of opinion that besides the recommendations of the Corporation as given above, it should be rendered illegal to fish at all with the trim and shrimp net during a specified season of the year. It would be neither politic nor just to do away with the trim nets altogether; nor would it do to alter the mesh; for supposing the extreme end of a trim or shrimp trawl net were made of a larger mesh than at present, the action of the water would be such as to elongate the meshes and narrow the width, besides which if the mesh of these nets were altered, very great expense would devolve on the fishermen in getting new tackle.

The question now arises as to what should be the time of year when a close time for the trim and shrimp nets should be enacted, and we must consider, first, that we do not know for certain when, where, or how the gravid sea fish deposit their spawn, but we can learn for certain by actual observation the time when the fry are most abundant.

The close time for trim and shrimp nets, therefore, should be determined by the Corporation of Lynn, and fixed accordingly, with the approval of the Secretary of State, as provided by Section 10 of the Bill for the Wash Sea Fisheries Act, 1874. (*See* Appendix.)

A fearful destruction of the fry of sea fish is going on in many other parts of England, especially in Bridgewater Bay. In my Salmon Fisheries Report for 1875, page 51, I have written as follows:—"As regards the destruction of sea-fish fry in estuaries, I regret to say that the terrible slaughter of young sole, turbot, and fish of all kinds, still continues in Bridgewater Bay. I was informed by Mr. Robinson, of Embdon, Bridgewater, that on March 23rd he observed one of his men preparing to make a dinner on 34 soles and 5 flat fish, most of them about 3 inches in length, none being more than $4\frac{1}{2}$; this lot had been bought for 2 *d.*; they

were caught in the hose nets. The sum asked for a large pair of soles at Bridgewater is 3 *s.* 6 *d.*" Here then we have another case where legislation is called for; but as I am not here reporting on Bridgewater, I must confine myself to the Lynn fisheries.

The machinery for carrying out the proposed Act for Lynn is perfect, and the Authorities are both able and willing to carry out any powers entrusted to them. I am therefore strongly of opinion that sea fishery legislation should begin at Lynn; I feel certain it would prove successful and beneficial to the public as well as the fishermen themselves. When this is demonstrated as a fact, then there will be a precedent for legislating for foreshore sea fishings in other parts of Her Majesty's dominions.

The Fisheries of Wells.

Wells is a small seaport town about 29 miles east of Lynn, and 32 north-west of Yarmouth. The fishing trade has of late years fallen off considerably, although it has now the advantage of rail-road communication with all parts of England.

My inquiry at Wells was numerously attended by local fishermen. Mr. Richard Smith, who has known Wells 60 years as pilot, fisherman, master of the steam-tug, and coxswain of the life-boat, informed me there were no edible crabs or lobsters; there are "hook fish" in the winter; there are cockles, clams, not many shrimps, few whelks, few razor shells; there is no trawling, except with a steam-boat; they discontinued trawling because it did not pay, although eight years ago there used to be three or four smacks. They used to catch soles, brill, thornbacks, butts, and ordinary trawl fish, and sometimes very large soles in May. The little soles begin to appear about the middle of June, and last all the season; he cannot understand why the fish have disappeared.

Other witnesses gave evidence to the same effect.

Mr. Rump, of Wells, writes me:—

"Disappearances of certain fishes have happened within the last twenty years. The haddocks are entirely gone, although formerly there was a very great abundance of them. It was only a summer fishery, however, lasting two months, May and June. The haddock ground extended from Blakeney Harbour to the Dudgeon Light-ship, thence to Wells Harbour. They were taken by "trot lines," the bait used being lug worms. Codfish have nearly deserted this coast, and skate are much diminished in number, and the same may be said of turbot, gurnards, whiting, flounders, dabs, and plaice. Gray mullet fishing was always an uncertain business on this coast.

"As a proof how the skate fishing has declined, it may be stated that twenty years ago it was a common thing for each coble to average twenty skate a day from Michaelmas to March. Two winters ago the fishery was so bad that no lines were laid, and last winter but two cobles regularly fished, with very little success. Shrimps, since the new establishment was made to enclose the western salt marshes, have become very scarce in the harbour, and the same may be said of mullet and flat-fish.

"Garfish

"Garfish are on the coast during May, and stay a few weeks. They are taken with a seine net made for the purpose. Small salmon trout are occasionally or frequently taken with them. Mullet succeed the garfish."

Oysters were abundant 20 to 30 years ago, all over the back of Burnham flats, to the easternmost limits of the ground, and between Haisborough and Wells to the west a distance of about 25 miles. Colchester vessels used to catch them; they averaged six score to the hundred, and were about four inches across.

The oysters have all disappeared. I had some difficulty in finding out the reason of this; the most probable is, that there is a vast quantity of "live sand" continually floating about; these sand storms are very destructive to oysters, as it covers them over and kills them. All the fishermen agreed with me that it would not be advisable to attempt any restoration of these oyster beds on account of the danger from these sand storms.*

There are now no mussel beds, they have been all washed away by the tide; it is desirable to attempt to restore them, and I explained to the fishermen how this should be done.

There is a large bed of cockles at Stiffkey, four miles from Wells, which are considered the best that are brought to market, especially those of a larger kind, which have rather a lightish blue-tinted shell, and are better known as "Real *Stukey*" (the Norfolk pronunciation of Stiffkey). About 100 poor women obtain a living by collecting them all the year round, and they get about 16 *d.* a bushel of four pecks. The cockles are sold retail a halfpenny a pint; there are about thirty cockles in a pint.

The more these cockles are worked the more abundant they become. The cockles have certainly not decreased but rather increased these last few years.

Great complaints were made of the taking in of the mussel scalps in the Wash by the authorities of Boston and Lynn, and complaints were made of the working of Sect. 9 of Lynn deep oyster and mussel fishery. The clause reads as follows:—"Save as by Article 12 in this order expressly provided, no person shall at any time remove from the fishery, or from one portion of the fishing grounds to another, any mussels of less than two inches in length, or any oysters which will pass through a circular ring of two and a half inches in diameter, measured on the inside side of such ring."

Complaints were also made of the interference of the water-bailiffs. Some of the men had been summoned and fined. The water-bailiffs had told them from which scalp to load, and when loaded they were ordered to unload their cargo, as they had unsizeable mussels. They said that they had received no notice of the local inquiry when these grounds were first taken in. I read to them Clauses 30 and 31 of the Sea Fisheries Act, 1868, the effect of which is that before an Order for taking in fisheries is made printed copies

* A similar condition of things exists in the mouth of the Exe, Devonshire.

copies of the draft of the Order shall be published and circulated, giving information to all parties interested. "The Board of Trade shall receive any objection to the Order during one month after the first publication of the Draft Order; at the expiration of the said month an inquiry shall be held at a public sitting on the proposed Order."

Some of the men said that they saw the notices but did not take any action upon them. Others, that they knew nothing about the taking in of these grounds till they found they were warned off them. A reporter, Mr. Knight, gave evidence that an inquiry under the provisions of the Sea Fisheries Act had been held, and that he was present, and took notes for the local newspapers.

At my inquiry at Lynn, Mr. Archer, junr., Deputy Town Clerk, gave evidence that he personally knows that all the notices under the Sea Fisheries Act were duly given. The Inspector held an inquiry, and the people of Brancaster presented a memorial against the order, but nobody appeared, and the Order was made in due course. Anybody who wishes to gather mussels, &c., on the ground now protected by the Order, could do so by taking out the license, as provided by the Order at Wells.

I advised the fishermen that if they have any complaint to make on the above point, that they should appeal to the Board of Trade.*

Finally, I advise that no legislation for the fisheries of Wells is required.

The Crab and Lobster Fisheries of Cromer.

The crab and lobster fisheries of Norfolk I ascertain have their head-quarters at Cromer, Sherringham, Runton, Weybourne, and the adjoining villages situated along the coast along the extreme north of the county of Norfolk. I held my inquiry at Cromer; the Sherringham fishermen attended to give evidence.

I have ascertained that the crab and lobster fisheries, which are all public fisheries, and at present are carried on without any legislation whatever in this neighbourhood, may be defined by the following limits. The Cromer fisheries begin on the eastward at a point opposite Sidestand, and extend as far west as Runton. Cromer itself is situated about the middle of this district. The Sherringham fisheries begin on the eastward of Runton, and extend westwards to about opposite Weybourne. The crab-pots are set out at sea from the fore-shore to the distance of about two miles. The extent of the united Cromer and Sherringham crab fisheries is about eight and a quarter miles long by two wide. The bottom of this district consists of large flints, with a large portion of marl, in which are found occasional large rocks from one hundred weight to four hundred weight each.

The sea bottom is very irregular, so that a trawl net cannot be used. The whole of this sixteen square miles is a vast forest of sea-weed, and is naturally a splendid breeding and feeding place for crabs.

* Since writing the above I have heard that an appeal from the Wells fishermen has been lodged at the Board of Trade.

crabs. My observations in these pages are entirely confined to the edible crab (*Cancer Pagurus*), and do not include the green-crabs (locally called Kittawiches), or other kinds of crabs.

After a limit of two miles from the shore, the weeds and rocks begin to gradually disappear, and the ground begins to be what is called "spotty," *i.e.*, rock, alternating with smooth ground. The crabs are scarce in this spotty ground.

In former times the crabs were caught by what is called the "hoop net." This was sunk to the bottom of the sea and worked with the hand, after the fashion of a minnow net, but about 12 years ago crab pots were invented. They are made of a cage of thick string netting, fastened across bows of iron or wood. This cage is one foot nine inches long, and one foot three inches across the bottom. The crabs enter the crab pots through two funnel-shaped doors, which act on the principle of a mouse trap; a side door can easily be let down and the crabs removed. The bait used for catching crabs are flat fish, locally called "butts." These butts and other dead fish are fastened inside the crab pots by being placed between two leather thongs, a sliding button keeps them in position; they are sunk to the bottom of the sea.

From the evidence of the Rev. F. Fitch, Vicar of Cromer; Mr. Herbert J. Johnston, of Runton; Mr. Sandford, of Cromer; Mr. Nightingale, fish merchant, of Sherringham; Mr. Grimes and Mr. Allen, fishermen, it appears that the crab and the lobster fisheries, the principal industry of this neighbourhood, and of *immense* importance to the inhabitants, have *fallen off* and become impoverished in the last few years to an alarming degree. If some remedy is not speedily applied, their extinction is feared.

The Rev. Mr. Fitch stated that the population of Cromer is about 1,415; of these, about 120 are fishermen; upon their earnings the wives and children principally depend. Mr. Andrew Johnston, M.P. for Essex, about four years ago, brought in a Bill for the preservation of crabs and lobsters, but nothing came of it. An Act of Parliament would be welcomed by his parishioners, as well, as he had ascertained, as by the fishermen of Runton, Sherringham, and Trimingham. The fishermen formerly used to clear between 3 *l.* and 4 *l.* per week during the height of the season; now they only clear about 1 *l.* per week, and often not so much as that.

The cause of the decrease of the crab and lobster fisheries is, first, the *wholesale destruction* of small crabs, called "Toggs," or "Short crabs"; and, second, destruction of crabs and lobsters in spawn.

These togg crabs are little things. Five specimens of "toggs" were handed into the court by Mr. Grant, fish merchant, for examination. Two of them measured across the back respectively 2¼ inches and 2⅝ inches; the others measured 3 inches each. These little crabs are sent to the market for food. The little crabs are also ruthlessly smashed up at sea, and used as bait to catch the butts and other fish, which are used as bait for the crab pots. This terrible destruction of small crabs has been going on for many years. In the Appendix, Fig. 1, will be found outlines of these little toggs which are destroyed in such numbers every year.

Mr. Edmund Bayfield, of Sherringham, over 60 years in the

fishing trade, writes me that he could formerly take more good-sized crabs in one day than can now be got in a week, and only the small crabs, which are sent to market at London, Norwich, and elsewhere. This is mostly owing to the crab pots that came into use twelve or fourteen years ago, and there are about 100 crab boats at Sherringham, and each boat have 20 pots, so they bait 2,000 pots. These crab pots are the great evil, and besides they destroy great quantities of crabs for bait; there is no fair fishing now. The small crabs used to fetch 4 *d.* and 6 *d.* a score five or six years back, and are retailed at 1 *d.* each at Norwich and Yarmouth. Sometimes a boat then got seven or eight bushels in a day of these penny crabs, but not now. The Cromer men tried to preserve these crabs, and the Sherringham people did not. We could go and earn 3 *l.* a week at one time then; now 1 *l.* would be a good week's work; and many would be able to earn a good living again if there could be a law made to stop this catching of small crabs. Oysters are nearly all gone. I don't know the reason; perhaps it is over-fishing also, and perhaps sand.

Mr. Allen, of Cromer, informed me that the Cromer men were in the habit, of their own accord, of returning the toggs to the sea. He himself, in one day's fishing, has, on the average, turned into the water about 800 toggs; other fishermen, he believed, had done the same.

Mr. Nightingale, a fish merchant of long experience, of Sherringham, gave in evidence that he estimated that, at Sherringham at least, 28,800 *undersized crabs*, worth barely one farthing each, were brought ashore and sold in the course of *one day*. This makes about *three-quarters of a million* of short crabs destroyed *in one month*. This, moreover, is independent of those destroyed at sea or on shore for bait. The number of three-quarters of a million crabs thus captured fetched 500 *l.*; whereas, if they were returned to the sea, they would the following year be worth *ten times* that amount, or 5,000 *l.* Crabs grow by shedding their shells entirely; they increase in size very fast. This is another reason why the toggs, or "Short crabs," should be spared.

Mr. Grimes stated that a close time from September to March for crabs would in his opinion make a difference of 250 *l.* per week, and a corresponding difference to Cromer between April and August.

In former times there was an Act of Parliament (33 Geo. 2, c. 27, s. 13), which read as follows:—"That no person shall take, or destroy, or knowingly have in his possession, either on the water or on shore, or bring to shore, or cry, carry about, or expose to sale or exchange for any goods, any spawn, fry, or brood of fish, or any unsizeable fish, or any fish out of season; and if any offend, the fish-baskets, &c. shall be seized, and every offender shall forfeit for every such offence 20 *s.*, or three months' hard labour may be given in default."

A placard in which this Act was cited was produced by Mr. Johnston, and the placard ran as follows:—"Agreeably to the intent of the law thus provided, the main body of the fishermen are come to the resolution not only to abstain from breaking up, bringing on shore, exposing for sale, or destroying in any manner whatever,

whatever, the brood of those fish commonly called short crabs and lobsters, but also to use every proper and lawful means in their power to prevent others from injuring the breed by any of the above-mentioned practices."

For some time this clause was put in force; 10 years ago some local fishermen were brought before the magistrate for the non-observance of this clause. A list of summonses under the Act was handed into court, from which it appears that 28 people had been summoned between May 1842 and July 1864, before the magistrates, and most of them were convicted for taking unsizeable lobsters and crabs. It was then pleaded that a crab was not a fish. The enactment of 33 Geo. 2, c. 27, has been now repealed by the Sea Fisheries Act of 1868.* In this Act the following definition occurs:—"The term 'sea fish' does not include salmon, as defined by any Act relating to salmon; but, save as aforesaid, includes every description both of fish and of shell-fish which is found in the seas to which this Act applies." A crab, therefore, is now a "sea fish."

Mr. Sandford, who has known Cromer all his life, speaking in the interests of the fishermen of Cromer, desired that an Act of Parliament should be passed fixing the following four points:—

1. The time for the commencement and termination of the crab fishing.

2. The time for the commencement and termination of the lobster fishing.

3. To enact the standard size both for crabs and lobsters.

4. To enact the prohibition against selling, breaking up, or wilfully destroying any crab or lobster below the standard, either out at sea or on shore.

The crabs at Cromer and the neighbourhood are counted by a peculiar standard; thus, two crabs are counted as one. The two crabs being called *a cast*, six score cast of crabs is called a hundred. At Cromer, therefore, a *Hundred crabs is two hundred and forty.*

If one boat catches, in two tides' fishing, 10 casts or 20 crabs, it is considered a bad catch. A good catch would be three-quarters of a Cromer hundred, or 180 crabs. There are about 50 boats, each worked by two men, used by the Cromer fishermen; each boat would set from 30 to 35 pots. A new crab pot costs about 8*s*. These pots were invented about 12 years ago. The crab pots are frequently carried away and lost, the screws of steamers getting entangled in the ropes attached to the pots. Supposing, therefore, that the 50 boats have bad luck, there would be caught at Cromer daily 1,000 crabs; supposing the 50 boats had good luck, they would catch 9,000 crabs; this would give for the year a total catch, with bad luck in the open time, which is proposed, the 1st of March to the last day of August, being 184 days, less 26 days for Sundays, leaving 158 days for fishing, of 158,000 crabs.

* 31 & 32 Vict. c. 45, s. 5.

crabs. With a season's good catch, during the same hours, the taking would amount to 1,422,000 crabs.

If this number of crabs are caught under the existing state of things, with care and preservation the number and size would be immensely increased.

Sizeable crabs are sold in the Norwich and London markets, at the average at 50*s.* per Cromer hundred, or nearly 3*d.* each; these are all sizeable crabs. The dealers will not take the toggs if they can help it. The larger the crabs the more money the fish merchants will give for them.

It is my duty, when writing about the crab and lobster fisheries of Norfolk, to call the public attention to the horrible cruelties practised to prepare the crabs for market. They are actually placed in cold water, a fire lighted, and gradually boiled; the reason stated is, if they were put into boiling water at once they would cast their claws. I understand from Mr. G. Sandford, of Cromer, that the crabs and lobsters are all sent away alive from the Norfolk coast packed in hampers. This boiling crabs alive, I understand, takes place at their several destinations or markets. Wherever it occurs, it should at once be stopped. This cruelty to crabs should receive immediate attention from the Society for the Prevention of Cruelty to Animals.

In the presence of the fishermen themselves I showed how easy it was to kill a crab by running an awl or needle into the heart, which is situated in the centre of the body immediately below the mouth. I advise therefore that those whose business it is to boil crabs should be forced for the future to adopt this plan of killing them before they are boiled. A common pointed ice-breaker is a very good instrument for killing crabs. Lobsters are plunged into boiling water, and killed at once.

The lobsters on the above-mentioned ground have been getting very scarce the last ten or twelve years; the average size is also much diminished.* The causes of this are:

1. That berried hens, or lobsters carrying spawn, when caught, are sold spawn and all.

2. That lobsters of all sizes are sent to market. For the last 10 years numbers of lobsters as small as *four inches* have been sent to the market. Lobsters are sold by the pound. The proposed legal lobster should be seven inches in length, or about three to the pound.

Specimens of unsizeable lobsters, as boiled and sent to market, were handed into court. Two of them measured six inches, one six inches and three quarters. (*See* drawing in Appendix, Fig. 2.) Having taken all the evidence available relative to the destruction of crabs and lobsters

* Mr. E. Bayfield, of Sherringham, writes:—"Lobsters are very scarce now. No lobsters should be sold under eight inches, and they ought to have a proper time in spawning season. The old time was 25th June to 25th July; then there *was* lots of good lobsters, and would be again, with fair fishing, as there is no breeding-ground to beat it for lobsters that I have ever seen, and others say the same. What we want is a law from Government for this, and then people would have proper clothes and proper food that cannot possibly get it now."

lobsters at Cromer and the neighbourhood, I have come to the conclusion:

1. That the close season for crabs should be absolutely fixed, viz., from the 1st of September to the 1st March, *i.e.*, six months; the legal time for taking crabs should be fixed from the 1st of March to the 31st August, or six months.

2. That a close time for lobsters should be fixed, viz., from the 25th June to the 25th of July.

3. That all crabs and lobsters carrying spawn or ova should be returned immediately to the water with as little injury as possible at all times of the year.

4. That no crabs shall be taken from the sea that measure less by standard gauge than four inches and a quarter across the back.

5. That no lobster shall be taken from the water less than seven inches in length from the end of the tail to the top of the beak, not including the horns.

6. That all unsizeable crabs and lobsters should be immediately returned to the water with as little injury as possible.

7. That no person shall have in his possession, whether for sale or not, at any time of the year, any unsizeable crabs or lobsters.

8. That no person shall break up or destroy any crab below the standard, either at sea or on shore.

9. That it shall be illegal to boil live crabs gradually in cold water.

The above regulations will, I believe, meet the wishes of the fishermen and inhabitants of Cromer, and the Yarmouth fishmongers are of the same opinion. As regards the opinions of the London fish merchants on this matter, *see* Appendix, page 74.

In the Appendix, Fig. 3, will be found an outline of the proposed standard measures for crabs and lobsters; viz., four inches and one quarter for crabs, and seven inches for lobsters.

I have reason to believe that the above enactments would also meet with the approval of the crab and lobster merchants in London. An important salesman in Norwich Market informed me that he would be very glad to see these enactments carried out.

Conclusion of Report.

In bringing my Report to a conclusion, drawn up in obedience to my instructions from the Home Secretary, to "Hold an inquiry into the state of the crab, lobster, and other sea-coast fisheries on the coast of the county of Norfolk, with the view of ascertaining whether it is expedient that they should be placed under regulations adapted to prevent their being wasted, and to preserve them for the future"—

I beg to give, in short, the result of my several inquiries.

First.

Inquiry at Yarmouth and Lowestoft into the questions of spring, summer, and autumnal Herrings, Mackerel, Trawl Fishing, and Sea Trout.

No legislation for deep sea trawling is required. Small soles should be returned to the water when found alive in the trawl nets.

As regards inshore trawling and shrimp nets, I advise that it should be made illegal to sell, or expose for sale, any sole under seven inches in length, and that fishermen should be compelled to turn back all soles under that size into the water with the least possible injury.

As regards the shrimp nets, I advise that it should be made compulsory to pass the live shrimps through a sieve having a mesh which threepenny-pieces will just pass through between the cross bars, so that the smaller shrimps should be returned to the water.

I advise that an annual close time, from 1st April to 1st September, should be fixed for smelts, and no smelt should be allowed to be taken under five inches in length.

Second.

Inquiry at Yarmouth, Norwich, and elsewhere into the proposed cultivation of the rivers and Broads of Norfolk and Suffolk.

I recommend that the following legislation should be enacted:—

1. That a Board of Conservators should be constituted for the management and regulation of the fisheries of the rivers and broads of Norfolk and Suffolk. This board should have power to make bye-laws, subject to the approval of the Secretary of State for the Home Office.

2. That there should be an annual close time for all fish frequenting the Broads and rivers of Norfolk and Suffolk.

3. That the annual close time should commence on 1st March, and terminate at midnight on the 31st May.

4. That the annual close time should apply equally to private and public waters.

5. That no close time for rod and line is required.

6. That for the present it is advisable to enact the annual close time only. Power, however, should be given to the Board of Conservators to pass bye-laws, subject to the approval of the Home Office, as to the regulation of mesh of nets, use of liggers, cutting of weeds, &c.

7. That trawling in the rivers should be absolutely prohibited.

Third.

Third.

INQUIRY AT LYNN.

Sea fish, Oysters, Mussels, Trim and Shrimp nets, Whelks.

The oysters are already protected under the Sea Fisheries Act. They have a close time during June, July, and August, and a regulation gauge as to size is in force.

The mussels, under the provisions of the Sea Fisheries Act, have also a close time, and the size regulated by gauge.

The whelks should be passed through a sieve out at sea, and those below two and a quarter inches returned to the water.

As regards the trim and shrimp nets, I advise that it is desirable to enact as follows:—

It shall be illegal to have in possession, within a certain distance of Lynn (say five miles), any unsizeable fish; that is,

Sole	- - -	not less than 7 inches.
Dab	- - -	„ 7 „
Flounder	- - -	„ 7 „
Smelt	- - -	„ 5 „

Each being measured from the nose to the end of the tail.

That no person shall bring to shore, buy, sell, or expose for sale or exchange, or have in his possession for sale, any unsizeable fish anywhere within five miles of the Wash; fish for, catch, or attempt to catch, smelts with a net having a mesh of less than five-eighths of an inch in extension from knot to knot, measured inside the said mesh when dry.

That there shall be an annual close time of one month in each year at the period when the fry most need protection, during which the use of the trim and shrimp net should be entirely prohibited; this close time to be determined upon by the corporation of Lynn, subject to the approval of the Home Office.

That there shall be a close time for smelts between the 1st of April and the 1st of September in each year. It is also advisable that the live shrimps should be passed through a sieve having a mesh which threepenny-pieces will just pass through between the cross bars, so that the smaller shrimps should be returned to the water.

Fourth.

INQUIRY AT WELLS.

Mussels, Oyster, Sea-fish, Cockles, and Clams.

No legislation is required for these.

Fifth.

INQUIRY AT CROMER.

Crabs and lobsters.

I advise:—

1. That the close season for crabs should be absolutely fixed, viz., from the 1st of September to the 1st March, *i.e.*, six

months; The legaltime for taking crabs should be fixed from the 1st of March to the 31st August, *i. e.*, six months.

2. That a close time for lobsters should be fixed, viz., from the 25th June to the 25th of July.

3. That all crabs and lobsters carrying spawn or ova should be returned immediately to the water with as little injury as possible at all times of the year.

4. That no crabs shall be taken from the sea that measure less by standard gauge than four inches and a quarter across the back.

5. That no lobster shall be taken from the water less than seven inches in length from the end of the tail to the top of the beak, not including the horns.

6. That all unsizeable crabs and lobsters should be immediately returned to the water with as little injury as possible.

7. That no person shall have in his possession, whether for sale or not, at any time of the year, any unsizeable crabs or lobsters.

8. That no person shall break up or destroy any crab below the standard, either at sea or on shore.

9. That it shall be illegal to boil crabs gradually in cold water.

With the above recommendations, I conclude my Report on matters of the utmost importance, not only to the fishermen and inhabitants of Norfolk, but also to the public at large, and this inasmuch as the teeming population of England is eating up the products not only of the land, but also of the ocean. Vast as are the resources of the sea, yet it is possible that modern appliances and want of scientific cultivation for fishing may draw too much upon the general stock in certain localities. Should my recommendations result in the further cultivation of the sea-coast fisheries of Norfolk, and more especially in the opening up of the rivers and Broads of this country, a great boon will be conferred on the general public. I trust that, should legislation, based upon the above Report, take place, that it will result in furthering the great object of my life, viz., the increase of food for the people.

In my "Museum of Economic Fish Culture," South Kensington, will be found a collection of specimens I have put together as explanatory of the facts stated in the above report.

FRANK BUCKLAND,
Inspector of Salmon Fisheries.

APPENDIX.

A Proposed BILL for increasing the Supply of SEA FISH from the WASH. Prepared 1874 by the Mayor and Corporation of Lynn. *See* page 42.

WHEREAS the Fisheries in the Wash in or between the counties of Lincoln and Norfolk have of late years been greatly injured by the destruction of fry, and the taking of small and immature soles, smelts, and other sea fish; Now, for the purpose of increasing the supply of sea fish from the Wash: Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by authority of the same, as follows:

1. This Act may be cited for all purposes as "The Wash Sea Fish Supply Act, 1874." Short Title.

2. In this Act, unless there is something inconsistent in the context, the words and expressions hereinafter mentioned shall respectively have the meanings hereinafter assigned to them; (that is to say), Interpretation of terms.

"The Wash" includes so much of the estuary called the Wash in or between the counties of Lincoln and Norfolk as lies to the west or south-west of an imaginary line drawn from high-water mark at the Skegness Coastguard Station, in the county of Lincoln, straight to the Boston Outer Dog's Head Buoy, and thence to the Lynn Outer Knock Buoy, and thence to high-water mark at St. Edmunds Ness, otherwise Gore End, or Gore Point, in the county of Norfolk, which imaginary line is identical with the north-eastern limits or seaward boundaries of the Boston and Lynn fisheries, as defined in the Boston Deeps Fishery Order, 1870, and the Lynn Deeps Fishery Order, 1872 (confirmed by the Oyster and Mussel Fisheries Orders Confirmation Acts, 1870, No. 1, and 1872, No. 1), so far as such limits or boundaries extends, and includes several tidal rivers, bays, creeks, and waters open to the same, and extends up to the ordinary high-water mark along all the shores and banks thereof.

"Unsizeable fish" includes any sole, plaice, or dab not eight inches long, and flounder not seven inches long, and any smelt not five inches long, such length in each case being measured from the nose to the utmost extent of the tail, and includes any mussel not two inches long, and any oyster small enough to pass through a circular ring of two inches and a half in diameter, measured on the inside of such ring, but does not include salmon. 1 Geo. 1, c. 18, s. 7. 33 Geo. 2, c. 27, s. 13.

"Person" includes a body corporate.

"Secretary of State" means one of Her Majesty's Principal Secretaries of State.

"Court" includes two or more magistrates sitting in petty sessions.

"County" includes any borough, as well as riding, division, or liberty of a county having a separate Court of Quarter Sessions.

3. No person shall do any of the following things; (that is to say),

1. Bring to shore, buy, sell, offer, or expose for sale, or exchange, or have in his possession for sale or exchange, any unsizeable fish anywhere within miles of the Wash.

2. Fish for, catch, or attempt to catch, or kill smelts in the Wash between the 1st day of April and the 1st day of September in each year, both inclusive.

3. Buy, sell, offer, or expose for sale, or exchange, or have in his possession for sale or exchange, any smelts between the 1st day of April and the 1st day of September in each year both inclusive.

4. Fish for, catch, or attempt to catch, smelts with a net, having a mesh of less than five-eighths of an inch in extension from knot to knot measured on each side of the square measured when wet.

5. Place or fix two or more nets, behind or near to each other, in such manner as practically to diminish the mesh of the net used for taking smelts, or use any net covered with canvass, or any other artifice or device, so as to diminish the mesh of any such net.

Possession of unsizeable fish or unseasonable smelts *primâ facie* evidence of offence.

4. If any unsizeable fish or unseasonable smelts are found in the possession of any person on shore or at sea anywhere within the limits of the Wash, or within miles thereof, and he is taken or summoned before two justices of the peace, then if such person does not satisfy the justices that he came lawfully by the same, he shall be deemed to be a person who has the same in his possession for sale or exchange.

Penalty.

5. Any person doing any of the things prohibited by Section 3 of this Act, shall be liable to a penalty not exceeding five pounds, and shall forfeit all unsizeable fish, and all unsizeable or unseasonable smelts in his possession.

Recovery of penalties.

6. All penalties imposed by this Act may be recovered within six months after the commission of the offence before two justices, in manner directed by an Act passed in the eleventh and twelfth years of the reign of Her present Majesty Queen Victoria, chapter forty-three, intituled "An Act to facilitate the performance of the duties of the justices of the peace out of sessions within England and Wales

Wales with respect to summary convictions and orders," or of any Act amending the same; and all monies received in respect of penalties recovered under the Act shall be paid as follows; (that is to say),—Such portion, not exceeding one-half, as the Court may think fit, to the person on whose complaint the penalty is recovered, and so much, if any, as the Court may think in or towards payment of the expenses of the proceedings, and the remainder if any in manner directed by the said Act of the eleventh and twelfth years of the reign of Her present Majesty Queen Victoria, chapter forty-three; and all forfeitures shall be disposed of as the Court may direct, and the proceeds, if any, shall be applied in manner in which the monies received in respect of penalties are hereby directed to be applied.

Application of penalties.

Disposal of forfeitures.

7. Where any offence under this Act is committed in or upon any water forming the boundary between any two or more counties, boroughs, or districts of petty sessions, such offence may be prosecuted before any two justices of the peace in any or either of such counties, boroughs, or districts.

Jurisdiction for offences on rivers, &c.,

8. Any offence under this Act committed at sea beyond the ordinary jurisdiction of any justices of the peace shall be deemed to have been committed within the body of any county or borough adjoining the Wash, and may be tried and punished accordingly.

and at sea.

9. If any person feels aggrieved by any conviction under this Act, or by any determination or adjudication of the Court with respect to any compensation under this Act, where the sum adjudged to be paid exceeds five pounds, or the period of imprisonment adjudged exceeds one month, he may appeal therefrom in manner directed by law, subject to the conditions and regulations following:—

Appeal.

1. The appeal shall be made to some Court of General or Quarter Sessions for the borough, county, or place in which the court whose decision is complained of has jurisdiction, holden not less than fifteen days and not more than four months after the decision of the Court from which the appeal is made.

2. The appellant shall, within three days after the said decision, give notice, in writing, to the other party, of his intention to appeal, and the ground of such appeal.

3. Immediately after such notice the appellant shall, before a justice of the peace, enter into recognisances with two sufficient sureties conditioned personally to try such appeal, and to abide the judgment of the Court thereon, and to pay such costs as may be awarded by the Court.

4. The Court may adjourn the appeal, and, upon the hearing thereof, may reverse, confirm, or modify the decision under appeal, with or without costs, to be paid by either party.

10. The Secretary of State, on the application of the municipal corporations of Boston, King's Lynn, and Wisbech, may extend or vary

Power to extend or vary

close season for smelts, and size of mesh for smelt nets.

vary the time hereinbefore mentioned, during which it shall be unlawful to fish for, catch, or attempt to catch, or kill, smelts, or to buy, sell, offer, or expose for sale, or exchange any smelts, or have any smelts in possession for sale or exchange, and the size of the mesh of any net by which any smelts are fished for, caught, or attempted to be caught.

Order of Secretary of State.

11. Every such extension or variation shall be made by Order under the hand and seal of the Secretary of State, after one month's previous notice by advertisement in any newspapers circulating within the counties of Cambridge, Lincoln, and Norfolk.

Advertisements.

Evidence.

12. A copy of such Order, when granted, shall be advertised in the "London Gazette," and the production of a copy of the "Gazette" containing such advertisement shall be evidence of any such extension or variation having been duly made.

Local inquiry.

13. Before making any such extension or variation, the Secretary of State may direct a local inquiry to be held as to the advisability of any such extension or variation.

Penalties and forfeitures.

14. When any such extension or variation has been made, all penalties and forfeitures applicable under this Act to the close season for smelts, and to the size of mesh for smelt-nets herein mentioned, shall be respectively applicable to the extended or varied close season and size of mesh when so extended or varied as aforesaid.

Fisheries (Fresh-water).

A Bill for the better Preservation of Fresh-water Fish in England and Wales.

(Prepared and brought in by Mr. Neate and Mr. Malins.)

Ordered, by The House of Commons, to be Printed, 2nd June 1864.

Preamble.

Whereas the Fresh-water Fisheries of England have of late years been greatly injured, and it is desirable to amend the laws relating thereto: Be it therefore enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

Preliminary.

Short Title.

1. This Act may be cited for all purposes as "The Fresh-water Fishery Act, 1864."

Application of Act.

2. This Act shall not extend to Scotland or Ireland, or to the River Tweed, as defined by the Tweed Fisheries Amendment Act, 1859.

3. This

3. This Act shall not come into operation until the *First Day of October One thousand eight hundred and sixty-four.* Commencement of Act.

4. In this Act, unless there is something inconsistent in the context, the words and expressions hereinafter mentioned shall have respectively the meanings hereby assigned to them; that is to say, Definition of terms.

"Person" shall include any body of persons, corporate or unincorporate:

"Fresh-water fish" shall include trout, grayling, pike, carp, tench, perch, eel, barbel, bream, chub, roach, dace, gudgeon, crayfish and other fish breeding in fresh-waters, other than salmon as defined in the Salmon Fishery Act of 1861:

"Fresh-waters" shall mean all waters that are not tidal waters.

5. Nothing in this Act contained shall be construed to repeal or interfere with the operation of the Salmon Fishery Act, 1861. Not to interfere with Salmon Fishery Act.

6. Nothing in this Act contained shall extend or apply to any lake, pond, or other water in which lake, pond, or other water any person has an exclusive right of fishery. Not to interfere with private fisheries.

7. Upon and after the *First day of February*, and from thence until the *First day of June*, exclusively of the last-mentioned day, it shall not be lawful for any person to take by any means, except angling, any fresh-water fish, or to sell, or expose or offer for sale, or to purchase, any fresh-water fish caught in England or Wales, other than store eels or pickled or preserved fish caught before the commencement of the said before-mentioned period; the proof of which catching, both as regards time and place, shall lie on the defendant; but this Section may be varied as to any description of fish in any particular river, stream, or water, by one of Her Majesty's Principal Secretaries of State, in the manner specified in the Salmon Fishery Act of 1861. Close time.

8. It shall not be lawful to take and kill, except for the purpose of using them as baits, any of the under-mentioned fresh-water fish of less than the under-mentioned weights. Size of fish.

Pike - - - - -	Each Eight Ounces.
Carp - - - - -	
Tench - - - - -	
Eel - - - - -	
Barbel - - - - -	
Bream - - - - -	
Chub - - - - -	
Trout - - - - -	Each Four Ounces.
Grayling - - - -	
Perch - - - - -	
Roach - - - - -	
Dace - - - - -	
Crayfish - - - -	One Ounce.

9. No person shall take or attempt to take fresh-water fish with draught nets, hoop nets, drum nets, clear wheels, or other net Penalty on using certain nets.

net or device, except flew nets having a mesh of not less dimensions than in extension from knot to knot (the measurement to be made on each side of the square), or measured round each mesh when wet; and any person acting in contravention of this section shall forfeit all nets and tackle used by him in so doing, and the placing two or more nets behind or near to each other, in such manner as to practically diminish the mesh of the nets used, or the covering the nets used with canvass, or the using any other artifice, so as to evade the provisions of this section with respect to the mesh of nets, shall be deemed to be an act in contravention of this section, except that fresh-water fish may be taken by cast nets, and eels by grig wheels, and crayfish by wheels not exceeding two and a half feet in length, with a passage not exceeding one inch and a quarter; and small fish may be taken for bait with the common drop-round minnow net not exceeding three feet in diameter.

Penalties.

10. Any person acting in contravention of this Act shall incur a penalty not exceeding *forty shillings*, and for the second and for every subsequent offence not exceeding *five pounds* nor less than *twenty shillings*: and all nets and other engines used or fish taken contrary to this Act shall be forfeited, and may be seized and detained by any person having a right of fishing in the waters where the same shall be used or taken, or by any police constable or other police officer.

But this Act shall not apply—

(1.) To any person who takes such fish accidentally, and forthwith returns the same to the water with the least possible injury.

(2.) To any person who takes or is in possession of such fish for artificial propagation or other scientific purposes.

Recovery of penalties.

11. All penalties imposed by this Act may be recovered within six months after the commission of the offence, before two justices, in manner directed by an Act passed in the eleventh and twelfth years of the reign of Her present Majesty Queen Victoria, chapter forty-three, intituled "An Act to facilitate the performance of the duties of the justices of the peace out of sessions within England and Wales, with respect to summary convictions and orders," or of any Act amending the same; and all monies received in respect of penalties recovered under the Act shall be paid as follows; that is to say,

Such portion, not exceeding one-half, as the Court may think fit, to the person on whose complaint the penalty is recovered, and the remainder in manner directed by the said Act of eleventh and twelfth years of the reign of Her present Majesty Victoria, chapter forty-three; and all forfeitures shall be disposed of as the Court may direct, and the proceeds, if any, shall be applied in manner in which the monies received in respect of penalties are hereby directed to be applied.

12. Where

Offences on rivers may be tried in county on either side.

12. Where any offence under this Act is committed in or upon any waters forming the boundary, or reputed to form the boundary, between any two counties, or between a county and city borough districts of quarter sessions or petty sessions, such offence may be prosecuted before any justice or justices of the peace in either of such counties, cities, boroughs, or districts.

As to freemen's reserved rights.

13. Citizens, freemen, and burgesses of cities, towns, and boroughs within the meaning of section the second of an Act passed in the fifth and sixth years of the reign of His late Majesty King William the Fourth, intituled "An Act to provide for the Regulation of Municipal Corporations in England and Wales," may, by an advertisement purporting to be signed by any ten of such citizens, freemen, or burgesses, convene a meeting to be held at the common hall, at which a majority of the persons attending the meeting, being such citizens, freemen, or burgesses, may pass bye-laws for the regulation of fisheries which such citizens, freemen, or burgesses hold in common as part of their reserved rights, and the penalties then enacted for the breach of such bye-laws; and the forfeitures made by breach of such bye-laws may be recovered and disposed of in the manner directed by section the thirteenth of this Act: Provided that no such bye-law shall come into operation, except in the manner directed by the said Act for the regulation of municipal corporations, section the thirteenth, nor if disallowed as therein mentioned.

In order to facilitate the legislation which I trust may take place relative to the future protection of the rivers and Broads of Norfolk, I now give the Fishery Laws of the Thames now in force, the Rules of the Thames Angling and Piscatorial Societies, &c.

Extracts from the Rules, Orders, and Ordnances for the Fisheries in Thames and Medway.

Clark, Mayor.

Rules, Orders, and Ordnances, to commence and take place from the 1st day of November 1785, made, framed and set down in writing by the Court of the Mayor and Aldermen of the City of London, the 4th day of October 1785, for the governing and regulating all persons who shall fish or drudge in the River of Thames and also in the Waters of Medway, within the jurisdiction of the Lord Mayor of the said City of London as Conservator of the said River of Thames and Waters of Medway, as common Fishermen or Drudgermen or otherwise; and for declaration in what manner they shall demean themselves in fishing, and with what manner of nets and engines, and at what times and seasons, they shall use fishing in the said River and Waters of Medway within the jurisdiction aforesaid; and for ascertaining the assize of the several fish to be there taken; and for the preservation, from time to time, of the spawn and

fry of fish in the said river and waters within the jurisdiction aforesaid; and for obliging every common Fisherman, Drudgerman, or other person, who shall fish with a boat, vessel, or craft, from and after the said 1st day of November 1785, in the said River of Thames or in the said Waters of Medway, within the jurisdiction aforesaid, to have in his boat, vessel, or craft, both his Christian and Sirname, and also the name of the parish or place in which he dwelleth, painted in legible and large characters in some convenient place where anyone may see and read the same; and for preventing such name or mark of distinction from being changed, altered or defaced; with reasonable penalties annexed for breach of such Rules, Orders, or Ordinances, in pursuance of the Act of Parliament made and passed in the Thirtieth year of the reign of his late Majesty King George the Second, intituled An Act for the more effectual Preservation and Improvement of the Spawn and Fry of Fish in the River of Thames and Waters of Medway, and for the better regulating the Fishery thereof.

1.—*Item*, That all unlawful nets and engines, and other abuses offered to the prejudice and destruction of the Fishery, may be discovered, it is ordained by the said court, that no person shall stall the tide of flood; and that no person shall fish or endeavour to take fish in the said river of Thames, between London Bridge and Richmond Bridge, with any sort of net other than and except,

For Salmon, with a net of not less than six inches in the mesh;

For Pike, Jack, Perch, Roach, Chub, and Barbel, with a flew or stream net of not less than three inches in the mesh throughout, with a facing of seven inches, and not more than 16 fathom long;

For Shads, with a net of not less than two inches and a half in the mesh;

For Flounders, with a net of not less than two inches and a half in the mesh, and not more than 16 fathom long;

For Dace, with a single blay-net of not less than two inches in the mesh, and not more than 13 fathom long; to be worked by fleeting only, with a boat and a buoy;

For Smelts, with a net of not less than one inch and a quarter in the mesh, and not of greater length than 16 fathom; to be worked by fleeting only, with a boat and a buoy;

under the penalty of forfeiting and paying the sum of five pounds for every such offence.

2. *Item*, That no person shall lie or bend over any net whatsoever, during the time of flood, whereby any kind of fish may be hindered or kept back from swimming upwards for the benefit and profit of such fishermen as dwell above London Bridge, in the west part of the said river, under penalty of forfeiting and paying five pounds for every such offence.

3. *Item*, That no person shall, after the 1st day of November 1785, carry or use any smelt net on the said River Thames other than

than and except westward of Purfleet, with a fleeting-net of not less than one inch and a quarter in the mesh, and of no greater length than sixteen fathom, between the 25th day of March and the 1st day of May; and eastward of Purfleet, with a drag-net of not less than one inch and a quarter in the mesh, to be used only between the 1st day of November and the 25th day of March, and after the said 25th day of March the drag-nets to be delivered into the custody of the water bailiff for the time being, under the penalty of five pounds.

9. *Item*, That no person shall have or use, within the jurisdiction aforesaid, any double walled-net for catching any sort of fish, nor any flew or stream-net for catching any sort of fish, between London and Richmond bridges, which shall have any mesh of less size than three inches at least, except a shad-net of two inches and a half in the mesh, a flounder-net of two inches and a half in the mesh, a dace fleeting-net of two inches in the mesh, and a smelt fleeting-net of one inch and a quarter in the mesh, which said several nets are to be worked only in their respective seasons and places; nor any sort of net for catching fish eastward of London Bridge of less size than two inches and three quarters in the mesh, except smelt drags, to be worked only eastward of Purfleet, and smelt fleeting-nets westward of Purfleet, and in their seasons; and that no person shall have, keep, or use, within the jurisdiction aforesaid, any trammell or hood-net whatsoever for catching of fish, not being three inches at the least in the mesh, upon pain to forfeit and pay five pounds for every such offence.

10. *Item*, That no person shall lay, set, or place any weels, except greg-weels, in the River Thames, between the 1st day of March and the 1st day of July yearly, upon the penalty of forfeiting and paying forty shillings for every such offence.

13. *Item*, That no person shall fish or work for smelts upon or in the River Thames, westward of London Bridge, with a net of no less size than one inch and a quarter in the mesh, nor further westward in the said river than Richmond Bridge with any manner of net; and that no person shall fish or work for gudgeons westward of Richmond Bridge in the said river, except by angling or by weels, upon pain to forfeit and pay five pounds for every such offence.

23. *Item*, That the respective times and seasons for persons going forth to fish and taking fish in the said River Thames and Waters of Medway shall from time to time be observed by them, and be as follows, that is to say,

Flounders shall be taken all the year, except between Hall-Haven, on the Essex shore, and Fishnesse, on the Kentish shore, in the River of Thames, and the City Stone, in the Waters of Medway, between the 21st day of December and the 21st of February in every year;

Smelts shall only be taken eastward of Purfleet from the 1st day of November to the 25th day of March; and westward of Purfleet from the 25th day of March to the 1st day of May in every year;

Shads shall only be taken from the 10th day of May to the 30th day of June in every year;

Salmon shall only be taken from the 25th day of January to the 10th day of September yearly;

Trout shall only be taken from the 25th day of January to the 10th day of September yearly;

Pike, jack, perch, roach, dace, chub, barbel, and gudgeons shall only be taken between the 1st day of July and the 1st day of March in every year, except such as shall be taken in the month of June by angling;

Leaps and rods for eels shall be laid only from the 21st day of April to the 30th day of October yearly;

Lamperns shall only be taken from the 24th day of August to the 30th day of March yearly;

Whitings shall only be taken from Michaelmas day yearly to Ember week;

White shrimps shall only be taken from the 24th day of August yearly to the 25th day of March;

Red shrimps shall be taken in the River Medway only, and that from the 25th day of April yearly to the 1st day of July;

Buntings shall only be taken from the 1st day of September yearly to the 1st day of April.

Hookermen may hook for eels, all the year;

Stow boats, trawlermen, trinkermen, hebbermen, draggermen, and bandingmen, may lay leaps for eels and smelts during the time and in the season hereby allowed for taking such fish respectively;

And any person who shall catch any fish within the jurisdiction aforesaid in any other season of the year, or in any other manner, shall forfeit and pay for every such offence the sum of five pounds.

24. *Item*, That no fish of any of the sorts or kinds hereinafter mentioned shall be caught in the said river Thames or waters of Medway, or sold or exposed to or for sale if caught in the said River Thames or waters of Medway, of less weight or size than hereinafter is specified, that is to say,

No salmon of less weight than six pounds,

No trout of less weight than one pound,

No pike or jack under twelve inches long from the eye to the end of the tail,

No perch under eight inches long from the eye to the end of the tail,

No flounder under seven inches long from the eye to the end of the tail,

No sole under seven inches long from the eye to the end of the tail,

No plaice or dab under seven inches long from the eye to the end of the tail,

No

No roach under eight inches long from the eye to the end of the tail,

No dace under six inches long from the eye to the end of the tail,

No smelt under six inches long from the eye to the end of the tail,

No gudgeon under five inches long from the eye to the end of the tail,

No whiting under eight inches long from the eye to the end of the tail,

No barbel under twelve inches long from the eye to the end of the tail,

No chub under nine inches long from the eye to the end of the tail,

under pain to forfeit and pay five pounds for every such offence.

The Thames Angling Preservation Society.

This Society holds its powers under the Thames Board of Conservancy, Tower Hill. Secretary, Mr. Brougham.* Offices, 15, York-buildings, Adelphi.

Please observe that by the Thames rules all fish, except salmon and trout, are made legal or illegal by measurement, not by weight. The following are the rules of this Society:—

Fence Months for the Thames.

For Trout.

From the 10th of September to the 25th January.

For Pike, Jack, Roach, Dace, Chub, Barbel, and Gudgeon.

The months of March, April, and May.

Undersized Fish.

The following are the weights and sizes of fish that are allowed to be taken by the Thames Angling Preservation Society, acting under the Thames Conservancy:—

Trout, not less than 1 lb.;
Pike, Jack, and Barbel, not less than 12 inches;
Chub, not less than 9 inches;
Perch or Roach, not less than 8 inches;
Flounders, not less than 7 inches;
Dace or Smelts, not less than 6 inches;
Gudgeon, not less than 5 inches;

In each, measuring from the eye to the end of the tail.

All

* Mr. Brougham will be glad to send the annual report, with rules, &c. to any gentleman who applies.

All persons taking fish of less size and weight than those given above are liable to a penalty of 5 *l.* for every offence.

The following are the rules of the Piscatorial Society, Pall Mall East; J. Lander, Esq., Secretary. They have adopted the Thames measurements, with the exception of that of Jack.

The following weights refer to fish shown at the Society's weekly meetings in competition for prizes. They are, of course, all rod fish:—

No fish are eligible to be shown at the Society, except under the following conditions:—

Salmon.

To be according to and agreeable with the Act of Parliament for regulating the same.

Thames and Colne Trout.

To be taken only from the 1st of April to the 1st of September, "both days inclusive," and not less than one pound weight. From any other water, from the 1st March to the 30th September not less than eight ounces.

Grayling.

To be taken only from June 1st to February 1st, not less than one pound weight from the River Thames; from any other river, eight ounces.

Jack.

Taken only from June 1st to March 1st, not less than two pounds weight.

Perch.

The same time as Jack, not less than four ounces weight.

Roach.

Taken only from June 1st to April 1st, not less than four ounces weight.

Chub.

The same time as Roach, not less than twelve ounces weight.

Dace.

From May 20th to April 1st, not less than three ounces weight.

Barbel.

From June 1st to April 1st, not less than one pound weight.

Bream.

From June 1st to March 1st, not less than eight ounces weight.

Carp.

Carp.

From May 1st to March 1st, not less than one pound weight.

Tench.

Same time as Carp, not less than eight ounces weight.

Note.—The first day of the month to the succeeding first of the month, as specified for the different species of fish, are both days inclusive.

Mr. Sachs, a very experienced angler, and late Secretary to the Piscatorial Society, thinks the following should be the minimum weight for sizeable fish :—

	lbs.	oz.
Pike	1	8
Carp	1	0
Tench	0	8
Eel	0	8
Barbel	1	0
Bream	0	12
Chub	0	12
Trout	0	8
Grayling	0	8
Perch	0	4
Roach	0	4
Dace	0	3
Crayfish	0	1

I have held a consultation with the secretaries and several principal members of the Thames Angling and Piscatorial Society, and have come to the conclusion that should the proposed Board of Conservators for Norfolk wish to enact any standard size for fish at all, the standards which should be adopted for the Norfolk Board should be those which have been found to work so well in the Thames. I am strongly of opinion that the standard of size is preferable to that of weight; a gauge can always be carried or marked on the side of the boat, the fish measured, and immediately returned to the water. Weighing is a much more tedious process, and likely to be injurious to the fish.

On the General Supply of Crabs and Lobsters to London.

This report might not be considered complete unless I took this opportunity of giving the public what information I have been able to obtain relative to the general increase or diminution in the supply of crabs and lobsters to the London market. I have therefore taken evidence from most of the dealers, both wholesale and retail, in the metropolis.

The following are the places from which crabs and lobsters are derived :—East coast of England, going from the south to north—

Norfolk, Cromer, Yorkshire, Bridlington, Flamborough, Scarborough, Robin Hood Bay, Whitby, Durham, Hartlepool, Sunderland, Northumberland, Tynemouth, Cullercoats, Bulmer, Caister, Beadnell Point, Holy Island, Berwick-on-Tweed. The above localities produce crabs and lobsters, but mostly lobsters.

On the South and West Coast crabs and lobsters come from Bognor, Hamble, near Southampton (this is a store place), Isle of Wight.

In Devonshire, Torquay, Start Point, Plymouth.

In Cornwall, East and West Looe, Fowey, St. Austell, Mevagissey, St. Mawes, Penryn, Penzance, St. Leven, Land's End, St. Ives, Redruth, Scilly Island, Jersey, Guernsey, Little Sark, and Rocquaine. The product of these places are mostly crabs and crayfish. The crayfish nearly all come from Sennen Cove, near the Land's End. The greater part of these are sent to France.

The supply from Cromer was formerly most productive, but is now very much diminished. The supply began to fall off seven years since, and four years ago the last was seen of Cromer crabs. These Cromer crabs were formerly considered as very superior. The crabs from Dunbar are very small, some of them not more than three inches across; they are called in the market "Dunbar Bugs." Very small crabs are also received from Scarborough; one dealer received this season, from Scarborough, 20 barrels per day of small crabs, each barrel containing 200. After paying expenses and carriage, it is calculated that the fishermen can only realise 4 *s.* for 200 crabs, and 20 *s.* for 100 lobsters. Crabs are much wanted for the seaside markets in August and September.

Lobsters also come from the following places in Scotland:—Ayr, Rothesay, Tarbert, Gordon, Oban, Iona, Tobermory, Skye, Portree, Cromarty, Ullapool, Barra Islands, North and South Uist, Harris and Lewis, Stornoway. All the mulls round Ullapool, Argyleshire, Ross-shire, Thurso, Dunnet Head, Strome, Caithness. The product of these places are mostly lobsters and crabs, in small quantities only.

A well-known fishmonger in the West-end of London informs me that the supply has diminished more than half, both in size and number. Many crabs come from the West of England, Cornwall and Devon. The price has gone up 25 per cent.; a crab eight or ten years ago worth 2 *s.* is now worth 3 *s.* 6 *d.* The sale for crabs begins to fall off in October, and does not begin again till March. The chief time for the sale of crabs and lobsters is May, June, July, and August. In winter the crabs are watery. Crabs and lobsters are in best condition in warm weather.

As regards lobsters the supply to London has fallen off very much these last few years; the price has risen fully 20 per cent., as compared to what it was a few years ago; the scarcity is beginning to be felt. Lobsters arrive in London from Scotland, Southampton, Norway, Ireland, France, Sweden. The Norway lobsters are considered very good; the lobsters from the Orkneys are especially good. The lobster is never so good as when in the condition of a berried hen; berried hens occur most frequently April, May, and June. They begin to lose their berries about July, but still many berried

berried hens occur in July. The use of the berries is almost entirely devoted to cooking; they are used in many preparations by the West-end chefs, especially for the colouring and enriching sauces. The "chefs" are also fond of coral out of the body of the lobster.

A great many small lobsters are sent up from Bognor, in Sussex, and a few large ones come from Bognor. These smaller kind of Bognor lobsters are in great demand during the London season for breakfast and luncheon.

The gentleman above mentioned expressed himself very strongly against the practice of pegging lobsters. It takes all the goodness out of the claws; it causes the animal great pain, and makes it pine. The practice of pegging lobsters still goes on mostly in Ireland. When the peg is pulled out of the live lobster a quantity of watery stuff runs out. Tying the claws answers all purposes and does much better than pegging, and the tied lobsters are in much better condition than the pegged ones.

Mr. Shepherd, who boils lobsters for Scotts' (present proprietors Messrs. Winters) at the top of the Haymarket, informs me, that he has taken from one lobster weighing from 3 to 3½ lbs. *six ounces* of berries in the month of May. In August, out of 100 lobsters, he would not be able to get six ounces of eggs from the whole. On the 5th August, he had 26 crabs, not one of which carried any spawn. In the month of May a great proportion of these 26 hen crabs would be full of spawn. The eggs from the berried hens are used for colouring various sauces; the berries are often mashed up in the sauce, a little anchovy added, and than it is called "lobster sauce."

In order to supply these eggs for sauce to the cooks, Mr. Shepherd has collected in April and May, from 14 to 18 pounds of lobster spawn. I find that there are 6,720 eggs in an ounce of lobster spawn; here then we have destroyed eggs which might have represented, say in 16 lbs. of eggs, no less than 1,720,320 lobsters. A very good substitute for lobster spawn could be made by boiling logwood; he considers that all berried hens should be returned to the water all the year round. The Norwegian lobsters are best in season in May, June, July, and August; the Scotch lobsters begin to fall off in August. The shell of the Scotch lobster is thick, and when boiled is of a dark colour, and covered with white specks. The shell of the Norwegian lobster is thin and of a bright red colour. It is very cruel to plug lobsters; they pine from pain. If a lobster remains plugged for any considerable time the meat inside the shell becomes separated and retracted from the shell, and the flesh is injured; plugging is resorted to for quickness; tying is necessary in order to prevent the lobsters tearing off each others claws.

It is very cruel to put crabs in cold water and wait till it gradually boils. Lobsters are plunged into boiling water and killed instantly; the water must be actually at boiling point, and salt in it; if it is not, the flesh of the lobster is not so good as otherwise.

I was glad to find that boiling live crabs gradually in cold water is not practised at Billingsgate.

As regards the Bognor (Sussex) lobster, a friend has kindly procured me the following information.

1st. Lobsters are sometimes caught very large indeed; the average weight could not be obtained; they are also caught very small, even three or four inches in length; in these cases my informant regretted to tell me, that they are not thrown back into the sea; great numbers of these small ones are caught, and the fisherman seemed to fear the deterioration of the fishery, if such a course of proceedings continued.

2nd. What is the date the Bognor fishery commences and ends? It commences about March, this year the 4th of March, and terminates at Christmas, but when very cold it ends earlier. Last year early in November. When first caught in the early part of the year, the lobster appears sandy and covered with sea-weed and slime, as the sun gets stronger this wears off, and towards August and September they appear quite clean.

3rd. When does the lobster spawn? Unlike the prawn and shrimp, the lobster spawns only once a year, and it is *supposed* in winter, that is between January and March, when the fishery ceases. The lobsters are caught in wicker baskets, technically called "pots," which are laid down, and taken up at high tide; the fishermen are fully employed during the three months rest, in mending and making these pots; indeed it appears that the only reason they desist in fishing for the three months in the year, is the necessity for mending their appliances.

In answer to my question whether my proposed standard gauge of four and a quarter inches for crabs, and seven inches for lobsters, would act in any way injuriously and affect their sale by the wholesale houses in Billingsgate, I have received the following from an influential firm of crab and lobster merchants:—

"We observe with much satisfaction your desire to place under legislative surveillance the crab and lobster fishing on the Norfolk coast, and we are convinced, if the restrictions are properly carried out and adhered to, it must produce immense advantages to all who are interested in the trade and to the public generally.

"About twelve years since the supplies from this coast were very considerable, and gave employment to many; and as they were fish of a superior sort, and arriving here principally at the time when the other districts were slack, the prices realised were very considerable. The result of this was that the place was fished to such an extent as to cause the supplies to cease entirely, and to be now referred to only as a matter of history, scarcely a single package from that place having reached here for the past six years.

"We are clearly of opinion that the standard measure you propose to apply is admirably adapted, and if it could be extended to other places, it would produce similar beneficial results.

"When we tell you that for nearly a century our firm has been largely engaged in this trade, you will attach due importance to our remarks.

"In

"In almost every place with which we are acquainted, and they comprise nearly every district where crabs and lobsters are found, the result of our observations enables us clearly to affirm that an immense destruction of fish, and falling off in supplies from 25, and, in some instances, nearly reaching 75 per cent., arises from the power to take and offer for sale these fish without regard to size, and which when caught scarcely realise sufficient to recoup any person connected with them, whilst the loss that arises to the fishings needs, we are convinced, no remarks of ours to assure you.

"We consider, after most careful study, that a close time for crabs and lobsters could not judiciously be arrived at, and is not absolutely necessary, but your prohibition against taking them under your standard would, we are assured, if applied to places where such restriction is needed, produce better results than if all the fishings were closed for half the year round.

"We have purposely avoided any reference to berried hens, as we think restrictions in connection with them would readily be evaded; as, for instance, unlike salmon in similar condition, berried lobsters are almost always in first-class order, and when caught, instead of being returned to the water, would have all the berries brushed and washed out, leaving not the least trace behind. On the other hand, the berries, by the aid of saltpetre and sugar, would be preserved, and subsequently sent forward to answer the purpose it is now used for.

"We further think any prohibition in this matter would be met with considerable opposition, to say little of the difficulty of practically working it.

"Crabs when berried are in a weak and sickly condition, and most useless; they are almost always returned to the water or scarcely ever sent on for sale."

A retail dealer in small crabs among the poorer classes, I am glad to find, highly approves of my standard of four and a quarter inches for crabs. This, he says, is a saleable size; anything under should not be sold. Every crab must be scrubbed for market, and at a great trouble, to scrub these small crabs; people don't care to buy little crabs. Another West-end fishmonger prefers the lobsters from the Orkneys. The cooks are now using more lobster spawn than ever for colouring sauces and giving flavour to dishes. He gets most spawn in May, June, and July. The cooks must and will have it. The coral from the inside of the lobster is also used by the cooks.

A gentleman connected with one of the largest wholesale houses in London informs me that the supply of lobsters and crabs is getting less every year. Lobsters which formerly cost from fourpence to sixpence are now worth fifteenpence. Crabs are equally becoming scarce. Those formerly sold for eighteenpence are now worth two and sixpence. Everything is now killed, little and big, and thousands of pigmies are sent to market. Legislation is loudly called for. This gentleman quites agrees with me, that the minimum standards which I propose should be enacted.

Crabs and lobsters are sold in Billingsgate by curious, ancient

terms, viz.: a "Worst Nancy," which equals 40 small lobsters; a "Best Nancy," which equals 40 lobsters a size larger than the preceding. According to sizes above this lobsters are sold by a "Best Double," a Score, and a Ten.

From the evidence I have taken from London dealers, it is apparent that it would be difficult if not impossible:—First, To make a general close-time for crabs and lobsters. Secondly. To prevent the sale of berried hens, that is hens carrying eggs.

A fearful and murderous destruction of lobster spawn is undoubtedly carried on every season by the London cooks, who must and will have these eggs at any cost, and for my own part, I would gladly get this destruction stopped.

There are many, I regret to say, difficulties in the way of preventing berried hens being destroyed, the principal one being that, unlike the salmon, lobsters when carrying eggs are at their very best for human food. Notwithstanding this, it must be evident that the destruction of so many lobsters in the form of eggs must of necessity greatly tend to produce the scarcity of lobsters which is now being felt in the London and other markets.

The best practical remedy I can suggest to increase the supply of lobsters and crabs is, that in places where, like Cromer and Sheringham in Norfolk, crabs and lobsters are found to be getting locally searce, that my standard of four and a quarter inches for crabs and seven inches for lobsters shall be enacted, and I think there are many places where the fishermen themselves will at once gladly avail themselves of a provision of this kind.

The Growth of the Lobster.

It is important to know that as to the rate of growth of lobsters that it grows by shedding its shell.

According to some careful observations made at the Marine Laboratory, Concamean, it appears that the first year the lobster sheds his shell six times, the second year six times, the third year four times, the fourth year three times.

The following shows the rate of growth in a lobster, after each shedding of its shell.

Sheddings.	Length in Inches.	Weight in Drachms.
8th	2	1¾
9th	2⅓	2⅘
10th	2⅔	3½
11th	3	5⅗
12th	3½	9½
13th	4	10⅘
14th	4½	1 oz. & 4½

After

After a time lobsters and crabs cease to shed their shell at all. I have in my collection two crabs which have oysters growing on their backs; these oysters are four years old. These crabs therefore could not have shed their shells for four years. In the British Museum there is a gigantic lobster with 20 oysters growing on its shell. I calculate this lobster had not shed its shell for four or five years.

Lobsters and Crabs as Food.

The following table is taken from a treatise on food and dietetics by F. W. Pavy, M.D.

The analysis is given by Payen.

Composition of the Edible Parts of the Lobster.

	Flesh.	Soft Internal Substance.	Spawn.
Nitrogenous Matter - - -	19·170	12·140	21·892
Fatty Matter - - - - - -	1·170	1·144	8·234
Mineral Matter - - - -	1·823	1·749	1·998
Non-nitrogenous Matter and Loss -	1·219	0·354	4·893
Water - - - - - - -	76·618	84·313	62·983
	100·000	100·000	100,000

I am informed by Mr. C. C. Fuller, surgeon, 33, Albany-street, Regent's Park, that there is no substance which conveys phosphorus so readily into the human system, and which the system so readily and quickly assimilates, as the flesh of oysters, crabs, and lobsters. For this reason, oysters, crabs, and lobsters should form the diet of those engaged in business or literary pursuits, where much wear and tear of the nerve powers takes place from day to day; care must, of course, be taken that the organs of digestion are not disturbed by too large a quantity of this kind of diet.

The Norwegian Herring.

I have been requested by gentlemen interested in the Norfolk herring fisheries to give an abstract of a valuable paper on the herrings of Norway, from the "Bulletin de la Société Impériale Zoologique Acclimatation," Paris, 1865. The herring is found from Mandal, on the extreme south of Norway, to the North Cape.

The Norwegian Government has made an inquiry through Mr. Boeck. This naturalist considers that the herring is not a very great traveller, but it lives in the deep submarine valley

 between

between the 47th and 67th degree of latitude; that is from about from the English Channel on the South to the North Cape at the extreme north of Norway. It approaches the shore when about to spawn. It deposits its eggs from ten to one hundred and fifty brasses (fathoms). Herrings swim against the current to eat the microscopic crustacean and inferior animals. They abandon water which has not at least the temperature of four degrees centrigrade, *i. e.*, 40 degrees of Fahrenheit, either because this temperature is disagreeable to them, or do not find suitable food. Shoals of Scotch herrings are said to sometimes come over to them to Norway, especially to Flekkefjord. It appears that there are spring herrings also in Norway. From some unknown cause, the localities where they present themselves vary every year. They begin to take a few towards the end of March; they are then very thin; they are very good in July and August.

The winter herrings are fished between 15th January to 15th March, between Stavanger and Aalesund. Their enemies are the "Nord Caper," Balæna Glacialis, the "Stabjan," the Cod, Gadus Morrhua, the "Havkat" Chemæra Monstrosa, or King of the Herrings, and the "Pighai" Acanthias Vulgaris; that is, the Piked Dog Fish.

The General Falling off in the Supply of Oysters.

Complaints have frequently been made to me, both officially and privately, as to the present scarcity and high price of oysters. The present price of Whitstable natives per bushel is 12 *l.*; Colchester oysters average 12 *l.* per bushel; Seconds oysters average 8 *s.* to 10 *s.* per 100; if large, there would be about 500 oysters in a bushel; if small, about 1,000 in a bushel. I therefore beg to write shortly as follows:—

Various accounts have been given of the number of young oysters, or spat (*see* page 21), given out by the mother oyster; I now give the results of my investigation. I have examined native oysters, and find the number of spat contained in single specimens to be as follows:—

No. 1	829,665
No. 2	553,510
No. 3	424,031
No. 4	276,555

The cause of the general scarcity of oysters is mainly the want of a fall of spat, though much yet remains to be discovered to solve this most difficult question. No doubt, moreover, cases have occurred when over-dredging, plus the want of spat to make up for the loss and keep up the stock, have nearly annihilated the beds. (*See* page 21.) In many cases, however, it must be remembered, when there has been a large stock of breeders, no fall of spat has occurred. I believe that eventually I shall be able to breed, or rather force, young oysters artificially as I now breed young salmon and trout.

Spat

Spat falls in June, July, and August. There is sometimes a partial autumnal as well as a summer fall of spat. I have seen an oyster "black sick" as late as the 9th of November. Large numbers of oysters full of black spat, quite unfit for use, and unwholesome, are opened and thrown away in the various shops in the summer months. An observer in my employ collected in about four or five days in June, oyster spat enough to fill a glass caviare bottle, which held fourteen ounces. I calculate that there were thus destroyed no less than over one hundred and twenty-three million baby oysters in less than one week. It would not do to make too long a close-time for oysters, as it would not pay the dredgers of public beds to work them. (*See* remarks at bottom of page 43.) I venture, however, to suggest that, as it is illegal to sell salmon during the months of half September (about) according to the closing of various rivers, October, November, December, and January, so it should be illegal to sell any oysters at all in May, June, July, up to August 4th, the "oyster grotto" day of the London street boys. The close-time for oysters could easily be recollected by the public, who already (I know not the origin of the idea) hesitate to buy oysters when the letter R does not occur in the name of the month. The shopkeepers consider the oyster season begins in August. The demand for them does not become general till September. The question of enacting a general close-time for oysters is worthy of the most grave consideration.

Illustration, No. 1.

The figures in this illustration represents the "Toggs," or short crabs. They measure respectively, across the back, $2\frac{5}{8}$ inches and $2\frac{3}{8}$ inches. Other toggs were handed into court, measuring respectively $3\frac{1}{2}$ inches, $3\frac{1}{8}$ inches, 3 inches, 3 inches, 3 inches. At page 52 of the Report will be found a full account of the ruthless and wanton destruction of these crabs that has been going on at Cromer and Sherringham. It was given in evidence that about three quarters of a million of these toggs or short crabs had been destroyed in one month. (*See* pages 50-55.)

It is proposed to put an end to this destruction of small crabs by means of legislation, making it illegal, among other provisions (*see* page 55), to take, kill, or destroy any crab measuring less than $4\frac{1}{4}$ inches across the back. (*See* Diagram, Fig. 3.)

Illustration, No. 2.

This illustration shows the exact size of one of lot of a small lobsters taken at Cromer. That figured measures seven inches from end of tail to tip of beak. Vast quantities of these small lobsters are caught by the Cromer and Sherringham fishermen. (*See* page 54.) It is proposed that for the future no lobster shall be taken *less* than 7 inches from end of tail to tip of beak. (*See* Copy of Scale, Diagram, Fig. 3.)

Illustration, No. 3.

The figure marked out into the exact measurement of 4¼ inches is the exact scale which is proposed to adopt for the future to the crabs taken by the fishermen at Cromer and Sherringham. (*See* page 55.) When the Act of Parliament is passed regulating the crab and lobster fisheries of Cromer and Sherringham, it will be illegal for fishermen of this locality to sell, or expose for sale, any crabs under 4¼ inches across the back.

The other figure represents the proposed standard gauge for the measurement of lobsters. When the Act is passed it will be illegal to take any lobster at Cromer that is less than 7 inches from end of tail to the tip of the beak.

The crab measure is made of metal, the lobster measure of wood. The crab measure is made to fit into the lobster measure for the convenience of carrying in the pocket. When the metal gauge is fastened on to the wooden gauge a hollow space will be left; this is another gauge, also of 4¼ inches, for the measurement of crabs.

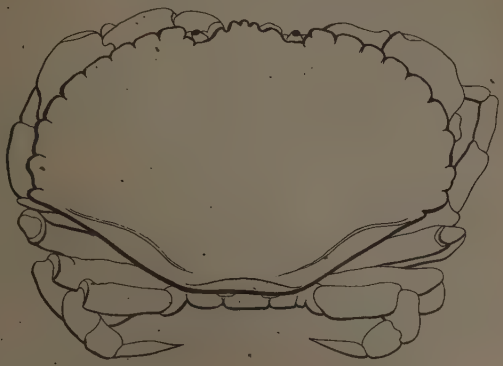
Illustration, No. 4.

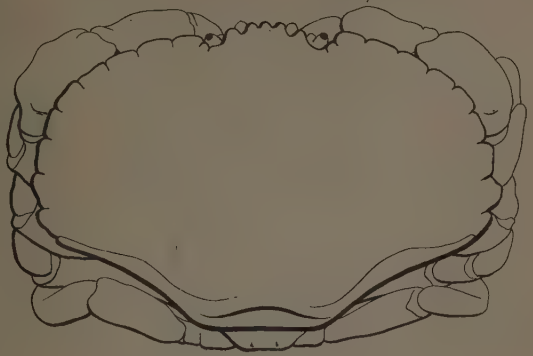
This diagram shows the rapid increase in size of crabs when they are growing. Crabs grow by casting their shells: it is very difficult to get a shell recently cast. The above specimen was sent to me by Mr. Sandford, of Cromer. The crab had cast his shell in the crab pot, so that the empty shell and the crab itself were quite perfect; the empty shell measures across 3⅞ inches; the crab which came out of the shell measures no less than 5 inches, 1⅛ inches larger across than it was a few minutes before.

If the toggs are preserved the general size of the crabs will be much increased.

No. 1.

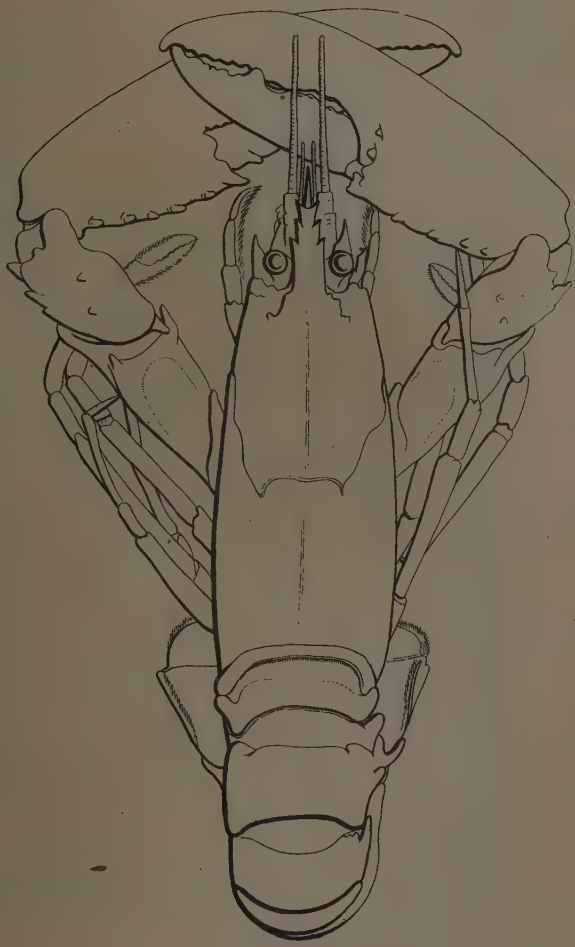
Life size of Toggs or "Short" Crabs killed by thousands at Cromer & Sherringham.





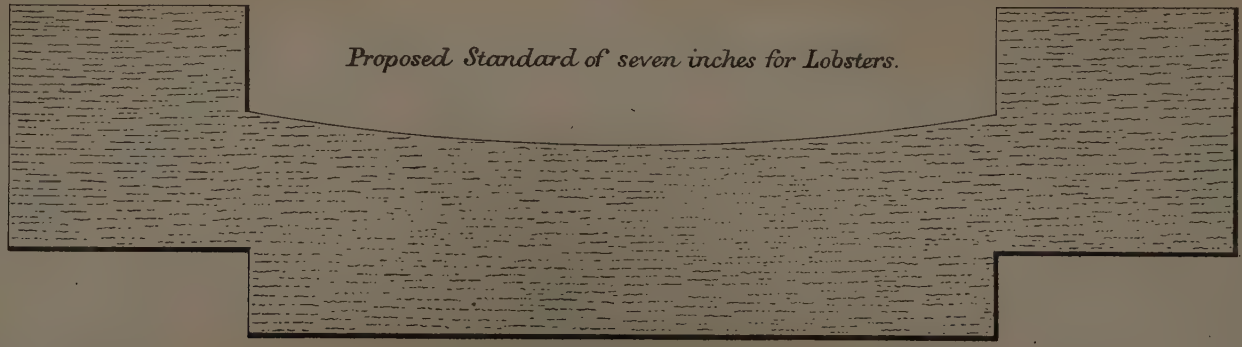
No. 2.

Life size of Lobster 6¾ inches in length.
Proposed Standard is seven inches.

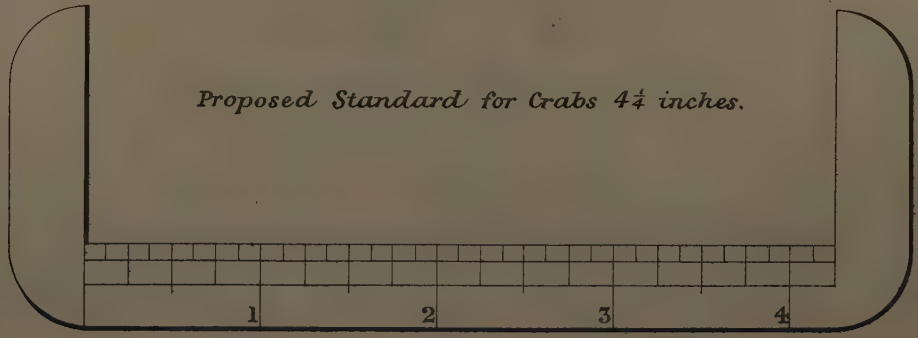


No. 3.

Proposed Standard of seven inches for Lobsters.

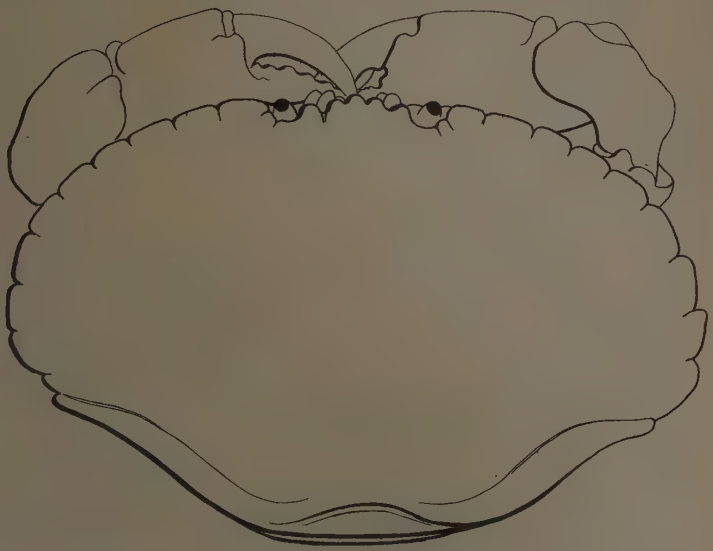


Proposed Standard for Crabs 4¼ inches.

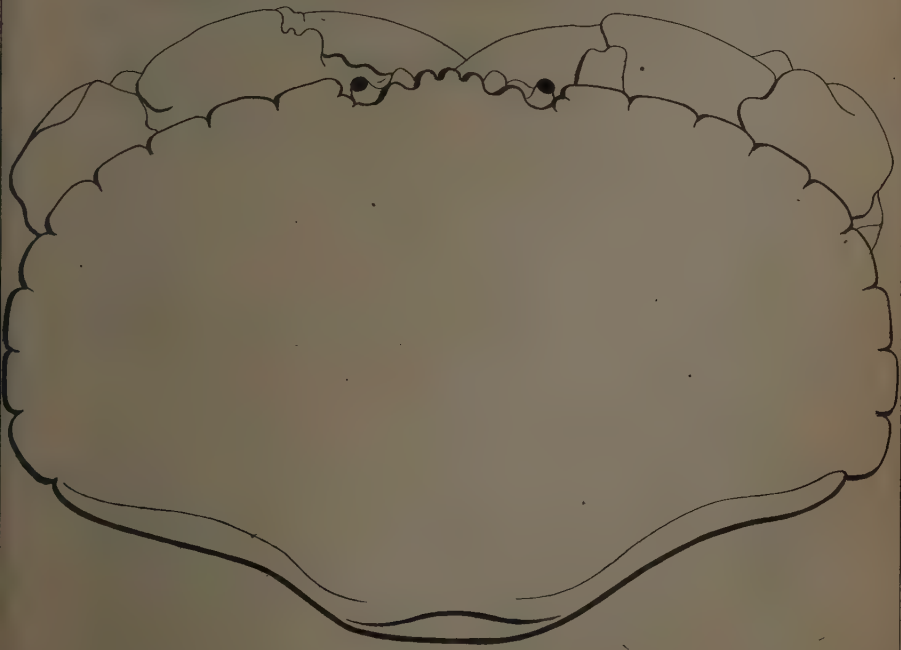


N°. 4.

Life size of Crab before casting its shell.



Life size of Crab directly after casting its shell.



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FISHERIES (NORFOLK).

REPORT

ON THE

FISHERIES OF NORFOLK,

ESPECIALLY

CRABS, LOBSTERS, HERRINGS, AND THE BROADS,

BY

FRANK BUCKLAND,

INSPECTOR OF SALMON FISHERIES.

(PRESENTED BY HER MAJESTY'S COMMAND.)

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